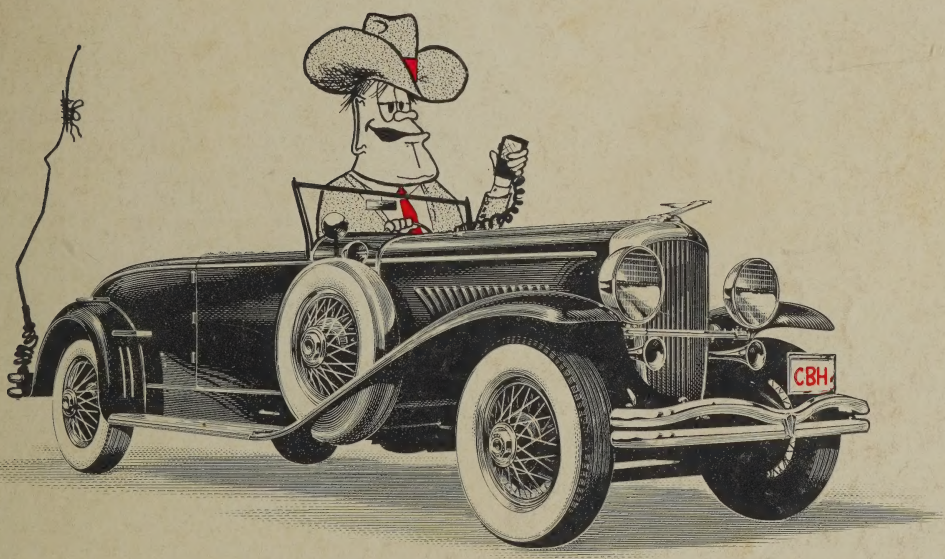
CB HORIZONS

JANUARY 1962
40 CENTS

SPECIAL MOBILE CB ISSUE



THE CITIZENS BAND RADIO MAGAZINE

IN THIS ISSUE—

All About Choosing and Using Mobile Units—CBH Moves—Novel Mobile Whip —Mobile Calling Channels—New CB Antenna—Add Dual Conversion to Your Rig—Add An S-Meter—CCM Reports— . . . and Much, Much More!

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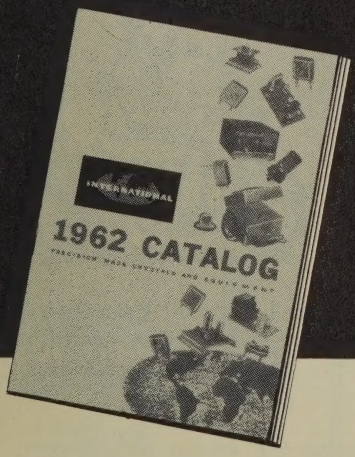

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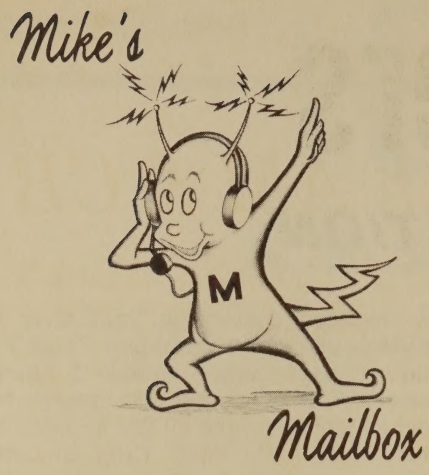


Dear Sirs:

You seem to be having a run of bad luck lately. Both you and *Popular Electronics* came out with a CB Directory in August. In November you both came out with another "first"—CB on TV via 77 *SUNSET STRIP.*

I enjoy your issues very much and always look forward to the next. Here's hoping you keep up the good work, although I really don't see how you can improve it any.

Bill Ferbrache, 18Q2631
LaGrange Park, Ill.

OK Bill, as a matter of fact POP'tronics did hit the same month as CBH with those two items — only CBH came out two weeks earlier each time than POP'tronics. If other magazines want to come out two weeks after us with features, more power to them. This is the kind of "bad luck" that makes a successful magazine.

Mike

Dear Sir:

There are are soom questions in my mind which I would like to get clear. (1) Is about these guy that you hear taking Right way they call (brake) and goes on call a nother unite and leaves other untes out the cold That was on Frist. Now the question is is a rule ageant this? Where did this wrod come from? And does it belong to citizen band?

The other is They use then like hams and see how far they can reach Tieing chennal so no one can use it.

Now there is aquestion about Call from onecall district tooo another. Is this Leago with in 15 to 20 miles?

Senceraly yours,
(*name withheld*), 20Q----
----------, N.Y.

We didn't have the heart to change the spelling on this letter because if it was intended to be funny we wanted you all to share in it. If it was serious, here is the answer: Their doant seem to be anything you kin do about this aufull "brake brake" habit soom fellows have accept not tooo let them brake in on you. Whan he tawlks like ham he is going against Partt 19. It is Leago to sendd substanshul messag from one nearby call district to your uint in another.

Mike

Dear Mike-

Was reading in CBH about the smallest mobile CB rig, and you asked about a motorcycle.

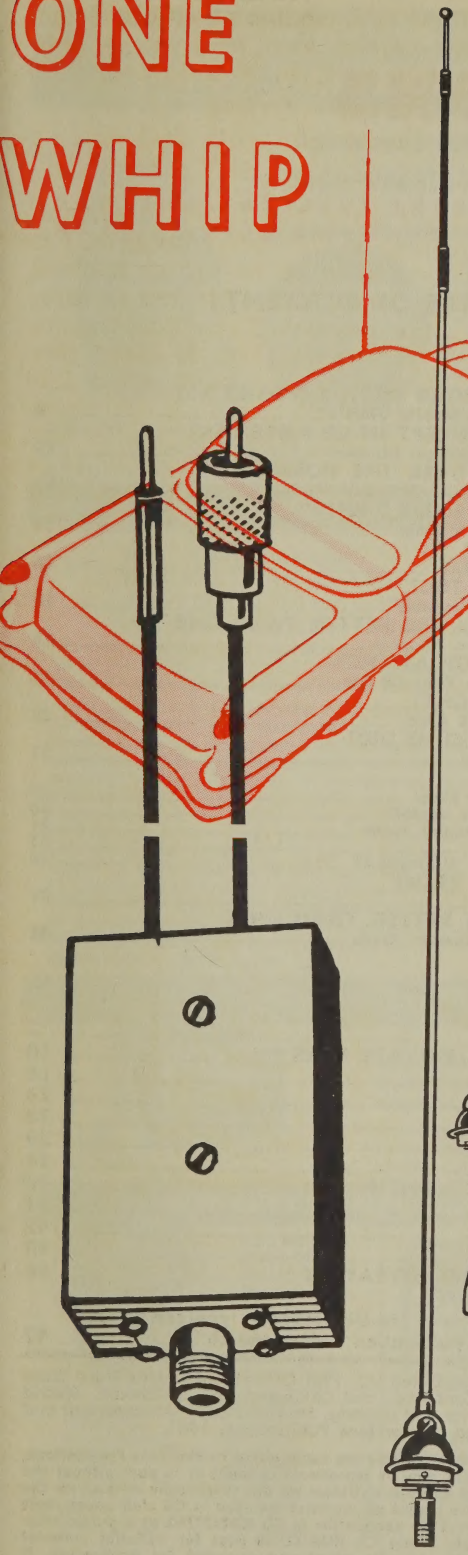
As far as I know, I have the only CB equipped 'cycle in the country.

Norm Yeater, 19Q7332
Canton, Ohio

As far as we know too, Norm. We're still waiting for a rig installed in something smaller than a motorcycle. We did once see a fellow at a CB Jamboree with a rig installed in a metal helmet—antenna right on top, batteries installed a la belt.

Mike

ONE WHIP



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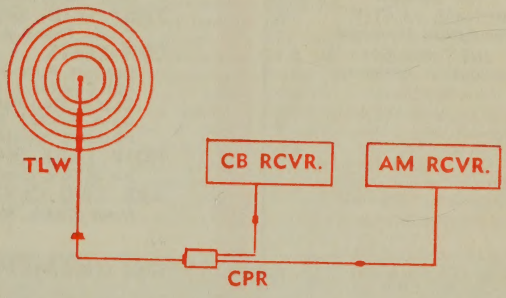
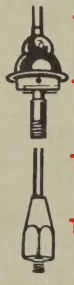
For the complete story on the Hy-Gain Top Loaded Whips and unique Coupler, ask your local Hy-Gain distributor.





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TLWT-M: identical to TWL-M but in three sections for telescoping down to 28".

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JANUARY 1962
VOLUME 2 - NUMBER 1

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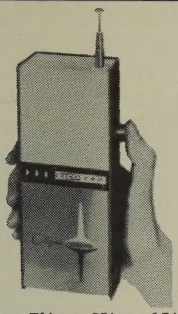

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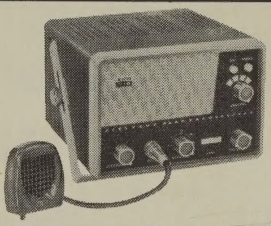

The entire transmitter oscillator circuit and RF final in every EICO transceiver, kit and wired, is premounted prewired, pretuned, and sealed at the factory (about 3 hours of skilled labor, precision adjustments and testing), complying with FCC regulations (section 19.71, part d). This permits you to build the kit and put it on the air without the supervision of a commercial radiotelephone licensee.

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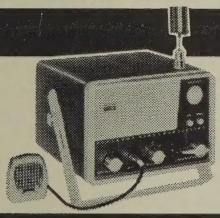

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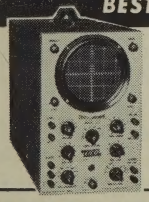

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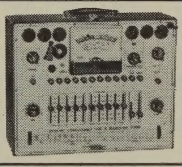

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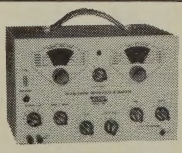

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CHOOSING AND USING MOBILE RIGS

By SIDNEY L. REYNOLDS, 18W2905

One of the greatest advantages of any two-way radio setup is the ability to communicate while travelling across country; this ability was one of the original motivations for establishment of the Citizens Band service, and is reflected in the fact that all 27-mc. CB stations are licensed as "mobile" units.

However, despite the wording of our licenses, some of us have no mobile units in the accepted meaning of the term — rigs mounted in our automobiles. If you are included in this group, and are considering putting a CB rig in your car or truck, here are some hints which can save you grief along the way.

Choosing The Rig

The first step, naturally, toward putting a unit in your car is to decide which unit to use. This may pose a somewhat difficult choice, since so many fine units are available. However, many otherwise - excellent rigs are not suitable for mobile use, so the time spent in making the decision is worthwhile.

The three critical points which determine whether a rig is suitable for mobile use are its power requirements, its size, and its convenience. Price may be an additional factor, since mobile equipment is more vulnerable to theft than is a base station.

Obviously, any unit installed in a car must be able to operate from the car's electrical system. Most present-day CB transceivers meet this requirement, but a few require additional external power supplies which may add to the inconvenience of installation — and any installation job can prove difficult enough in itself. A more subtle point to keep in mind is that few units operate from *both* 6 and 12 volt DC supplies; most operate on one or the other, and a 12-volt unit is useless in a 6-volt car.

Allied to the input power requirements are the questions of power output and modulation *"sock"*. While we

all know that 5 watts power input is the legal limit, it's not so well know that actual output power varies widely from unit to unit. One otherwise-excellent unit tested by the author developed only half a watt into the antenna at 5 watts in. Most develop between 2.5 and 3 watts; although we haven't seen one yet which surpasses 4 watts power output and doubt if we will in the near future. Since mobile work is frequently done from poor locations, with no gain-boosting possible in the antenna, the power output is an important point to check.

The size of a unit may not seem important, but a rig which is the right size for desk-top use may not even fit in the dash space available in some 1962 models—not to mention the compact cars!

And even if you can shoehorn the unit into place, you may meet objections from the distaff side of the household (or the YL, if you're still single) if all the front-seat legroom is sacrificed in the interests of CB. This point isn't so important as that of power, but it can still make or break a successful installation.

The final classification, convenience, has various meanings depending on where you live. Some states have laws prohibiting the operation of a radio unit by the driver of a moving car; others don't. If your operation is restricted to the at-rest variety, then you can consider such items as push-to-talk instead of intercom-type switching as just frills. However, if you intend to talk while in motion, push-to-talk becomes a necessity. So does the ability to tune the receiver without taking your eyes from the road (an impossible feat with some units since the knobs are in the wrong places).

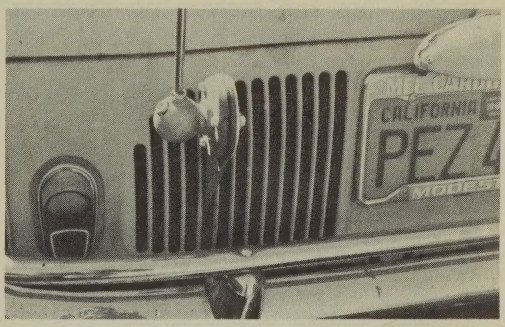
To sum up, for a successful mobile installation you need a unit which will operate from *your* battery, which gives the greatest output power you're willing to pay for, which includes push-to-talk operation, which is small in size, and which is convenient to operate from the driver's seat. Rigs which meet these specifications are available at prices ranging from $60 to $260 — *take your pick.*

Choosing The Antenna

The best rig in the world won't do much without an antenna, and the *perfect* mobile antenna has yet to be designed. This leaves us in the position of trying to choose the most suitable antenna possible from a host of available devices.

Up until about a year ago, only one choice was possible: the quarter-wave (sometimes called *full-length*) whip. Within the last 12 months, though, a number of manufacturers have come out with various types of *"loaded"* whips which are much shorter physically but provide the same electrical length.

Claims—about the only thing most of us have to judge by--made for these various loaded whips are uniformly excellent. Some of them are true, some are exaggerated, and the validity of



Renault mount—or what you can do with a small foreign car and a little ingenuity.

many depends on the individual installation.

In theory, at least, the "full-length" whip is most efficient; however, the full-length whip stands an even 9 feet high. Unless all your driving is in treeless desert, this length restricts the choice of antenna mounting positions to one—the rear bumper. And the rear bumper is probably the *least* desirable place on a vehicle to mount an antenna. Most of the rf is absorbed by the car's body; relatively little of it gets out.

The loading coils which make short antennas possible generally introduce some loss. On the other hand, they allow the antenna to be mounted on the car's roof, well in the clear. Frequently, the "gain" provided by the rooftop position *more* than makes up for the loss of the loading coil, making

the loaded rooftop antenna the best actual performer.

Notice that we said "frequently," not "always." Sometimes, depending on the construction of the individual auto, the rooftop position is poison. For instance, corvettes and several other autos use fiberglass (insulating!) roof material — and with this, rooftop mounting is out unless you reupholster the underside of the top with either copper screen or aluminum foil to provide a ground. And how are you going to put a rooftop whip on a convertible?

Another contender is the helical "fiberglass" whip; some of these are as short as 1½ feet, with the same electrical qualities as a full-length whip. This antenna is especially adaptable for mounting at the corner of the windshield, in the position normally occupied by a regular auto-radio antenna.

To sum up the factors involved in this choice, the best antenna (unless special circumstances intervene) is a rooftop whip; the next best is a windshield-corner-mounted whip; the least desirable is the rear-bumper-mounted full-length unit.

Among the individual antennas in each of these types are many choices; one of the major factors is size. Another is actual performance—and the best way to judge this is by asking other people who have used the antenna in question or by reading the lab tests in CBH. A final factor, naturally, is cost.

Installing The Rig

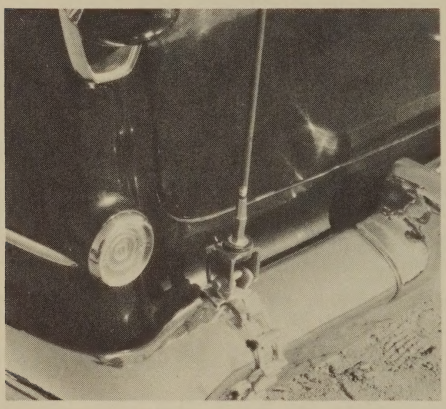
Once you've chosen the rig and the antenna, there is still not much use for them until you have them installed in your car.

Naturally, the details of installation will differ from rig to rig, and from auto to auto. Instructions for putting a Lafayette HE-20 into a 1960 Rambler, for instance, would vary greatly (in detail) from those for installing an International Executive 100 into a 1962 Volkswagen! However, the basic procedures are the same no matter what the rig or the car, and we'll go through them here.

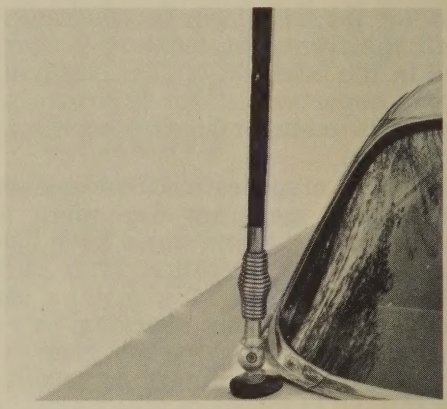
The first step, of course, is to decide where you want the rig to reside. The most popular location is under the dash, in the center. Here, the controls are easily accessible to either the driver or the front-seat passenger, but legroom in the center of the front seat becomes almost non-existent.

Other choices, depending on the size of the rig, may include under the dash to the left of the steering column; on the floor at the immediate front of the driver's seat (out of the way of the driver's feet); or, if the rig is very compact, directly on the steering column itself. A compact rig in a compact car may allow mounting right in the glove compartment.

The instructions which follow are based on under-dash-in-center mounting; if another position is chosen, some



Bumper mount—complete with chain wrap-around and Webster '49er Whip. No holes to drill makes this a popular type mount.



Body mount—complete with spring to allow whip to flex under pressure. Body mounts are jointed and may be mounted at any angle.

modification will be necessary.

To preserve as much legroom as possible, the rig should be mounted flush against the bottom of the dash and as far under as possible, consistent with operating convenience. Many rigs come equipped with hanger-type mounting brackets, but these can usually be improved upon in a few minutes with some sheet aluminum, since most of these brackets waste an inch or more of space between the top of the rig and the bottom of the dash.

To make your own mounting bracket, if your rig didn't come equipped with one or if you want to save some space, measure both the width and the height of the rig. Then cut a strip of aluminum about three inches wide, and as long as the width plus twice the height plus four inches. Bend this, using a bench vise to get a square corner, into a U-shape. Drill three 5/32-inch holes in each 2x3-inch lip.

Place the mounting bracket around the rig, padding both the top and the bottom of the rig with strips of ⅛-inch foam rubber cut from a "kneeling pad," and temporarily position the assembly in the car where you want it. With a sharp awl or an icepick, scribe the location of the six holes on the underside of the dash lip. Remove the rig and bracket. Centerpunch each of the six holes marked, and drill through the underlip of the dash using a 3/32-inch drill (take care not to drill through electric wires, windshield-wiper lines, etc.).

Now, replace the bracket and rig in position. Start a hex-head No. 6 by ½ inch sheet-metal screw in each of the six holes, and turn them up firmly using a socket wrench or a "nutdriver." The rig is mounted.

However, it's still not much use until you get the power hooked up. While it's possible to merely run a wire from the power plug to any handy hot terminal under the dash, this is not the right way to wire the power connections; the FCC requires you to *control* every installation covered by your license, and in a mobile rig this means that the unit should be locked "off" when you leave the car.

The simple way of accomplishing this is to wire the rig's power through the "accessory" terminal of the ignition switch. Then, operation is possible only when the ignition key is in the switch and the switch is turned; this satisfies FCC requirements.

The power rating of the "accessory" terminal is adequate to handle most rigs. If your transmitter requires more than 5 amps from the battery, though, you can control the power with a relay. In this case, wire the coil of the relay to the "accessory" terminal. Connect the arm of the relay to the transmitter power lead, and the fixed contact of the relay directly to the battery's ungrounded side through No. 12 wire. While a horn or headlight relay can be used, a 2,500-ohm unit such as the *Potter & Brumfield LM-5* will cause less battery drain.

While wiring the power line, it's a good idea to install a noise-filtering feed-through capacitor such as the *Sprague* 48P8 or 80P3 (less than $2 each); this will do wonders in eliminating battery-line noise. While noise-elimination is a complete subject in itself (see the article in this issue), this capacitor is easy to insert at this stage and difficult later.

Installing The Antenna

Antenna installations provide their own problems, again dependent on the antenna type and on the individual car. However, variations here are not so wide as in the case of installing the rig itself, so more detailed instructions can be provided for each of the three major types of installations.

Rooftop Whips

A rooftop whip can be installed by either of two methods, depending on whether you want to leave the car unmarred, or are willing to drill a single hole (which can be plugged come trade-in time) in the top. Let's take the simple, hole-drilling route first.

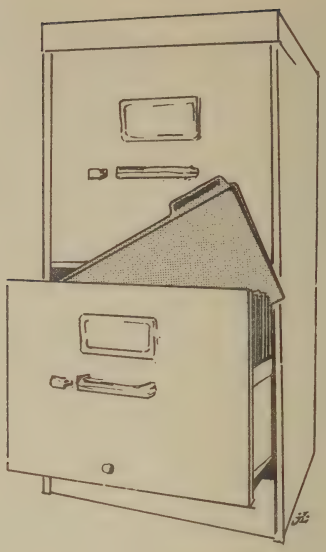
The first step is to go inside the car and remove the dome light; this is usually a simple matter once you locate the hidden fasteners which secure the assembly. Then, in the center of the dome-light space, drill a ⅛-inch hole through the car's steel top.

Using this ⅛-inch hole as a guide,

(*Continued on Page* 38)

INSIDE DATA

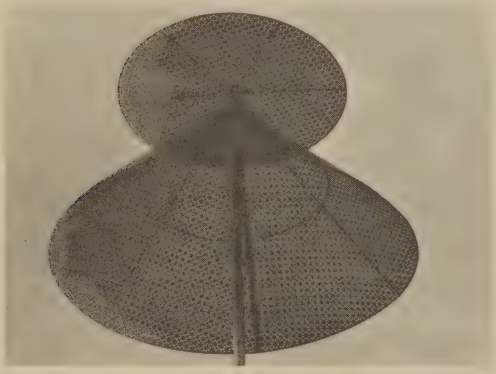
From The Manufacturers' Private Files



What Is It?

THE DISCONE ANTENNA FOR CB

New-From Stinger



(EDITOR'S NOTE: In our continuing quest to provide CB Horizons readers with the very latest design and product news in the CB field, the CB Horizons editorial staff is quick to spot truly unusual, new concept products which seem destined to make a special mark on 11 meter operation. We consider this month's report a real scoop. The Stinger Corporation, Lynwood, California rushed a lab proto-type model of their new Discone CB antenna to us by air freight late in November. Within 60 minutes of arrival the antenna was installed on our lab roof, and a large contingent of local CB'ers was gathering around to see what "the monster" looked like, and how it worked. Our most unusual report follows.)

By this time you have given eye treatment to the photographs, and are wondering just what manner of contraption Stinger is about to descend upon the CB world with.

The Discone antenna consists of two separate pieces: The "disc" and the "cone." Hence, the Discone.

Discone antennas are not new, although they have become considerably more popular in the past few years. Military Discone antennas are in use throughout the world, and a number of antenna manufacturers produce similar units that operate in the 50 to 150 mc/s region for base-to-mobile communications.

The gain of a Discone antenna is proportional to its physical size, or so we thought until we began tests on the Stinger Discone! The diameter of the horizontal disc (up topside) and the surface area of the semi-vertical cone are (in standard Discone design) directly related to antenna gain.

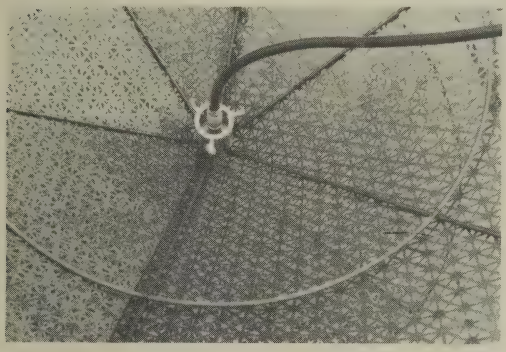
Radiation Pattern

What ever you know about antenna theory, you can forget, when we begin to discuss Discone antenna theory. To look at it, you wouldn't believe that it radiates maximum power in a vertical plane (ie. like a whip or ground plane). But in truth, it does. And to look at it you probably wouldn't believe that this antenna has an "almost"

negative angle of radiation. Well, it does. The radiation angle on this antenna was so low during early tests held at Stinger that when mounted at 18 feet above ground, signals beyond 5 miles out were barely readable! But signals within the magical 5 mile circle were unbelievably strong and steady.

To compensate for this negative angle effect, the Stinger engineers increased the diameter of the cone section, thereby making the slope of the cone sides more gentle. By doing so, they pulled the angle of radiation up right to the horizon.

Incidentally, the ability to absolutely place the radiation angle right on the horizon (not several or ten degrees



The coax fits to the underside of the antenna (inverted here). Three wing-nuts shown around cylinder clamp down on support mast which slides up over coax to mount.

above it as is the case with many other antenna designs) is invaluable. For example, you can determine the radius of coverage to the fraction of a mile merely by raising or lowering the height of the antenna.

About The Height

If you are an astute observer, you have already noted that the entire antenna is approximately 30 inches tall. Interesting? This means you can raise it up to a height of 20 feet, and still have the bottom of the antenna 17 feet 6 inches off the roof line.

In other words, the center of your antenna is 18 feet 9 inches above the roof! And the radiating portion (the disc) is 20 feet above the roof!

As soon as the CBH engineer's discovered the affect of height on the antenna's range, we ran a few checks starting at the roof level and working up to 20 feet. The following table shows what we measured:

Height Above Roof* (*base of antenna*)	*S5 Range*
6 inches	1.5 miles
5 feet	4.7 miles
10 feet	6.2 miles
15 feet	8.1 miles
17 feet 6 inches	9.4 miles
**30 feet	13.6 miles
**60 feet	18.4 miles

**Flat top roof, 19 feet above ground.*
***Receiving only, since height exceeds legal limit.*

The ability of this antenna to "cut-off" the signal at a certain mileage point is uncanny. We could see a number of applications where you are seeking coverage of a certain range or area, and wish to cut down on interference from stations outside that range. The antenna, by adjusting its height above the roof, provides you with a "built-in filter;" very - very handy.

This is an antenna? CBH staffer seems puzzled with the why's and wherefores of the "disc" (at right) and "cone" (at left) as it came from the crate.

SWR, Noise and Stuff

One of our lab engineers looked at the antenna configuration and mumbled "well-you can load up almost anything," meaning of course that with a proper matching transformer it is possible to make almost any piece of metal "load-up." So it was with particular interest that we checked out the SWR on the Stinger Discone array. Starting with channel 1, we found a match of 1.2 to 1. Not bad. Going through 11, things evened down to the point where we couldn't find reflected power, in other words, 1 to 1.

(*Continued on page* 20)

"OKLAHOMA OZZIE"

WHO DAT? (AND WHY)

By the time you read this we will be publishing CBH in Oklahoma City, Okla., 10W-land. Although the main offices of Horizons are still in sunny Modesto, Calif., where our two other monthly publications (COMMUNICATION HORIZONS, TV HORIZONS) are still published, CBH is now holding down the fort in the Sooner State. The entire company will be moving to Oklahoma City shortly after the first of the New Year.

The reason for the move? Simple; we just grew too fast and got too big to operate from Modesto (pop 65,000). As a matter of fact, CBH was keeping the two largest print shops in town going full blast and we still couldn't achieve the quality we desired in the quantity you require. If the magazine came out on time it looked ratty, if it came out looking nifty it was several days late. When we would tell the printer that we'd like 10,000 additional copies on a particular date, we'd receive a lot of promises and eventually a lot of excuses when the promised day came (and went) without CBH.

So we made a survey of the country and all likely printers to see if maybe the fault did not lie with the printer alone, but with the fact that you just can't conduct a growing business from Modesto.

We had printers' price quotes coming out of our ears and examined the printing plants of more companies than you could shake a linotype machine at. We checked in every large city across the nation. We examined postal rates and delivery times, roof space for antennas, and received a generous helping (again) of *promises . . . promises . . . promises.*

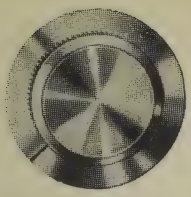
Finally we decided upon Oklahoma City for a number of reasons. First of all it is located in the center of the country so that magazines will reach their destinations earlier than before. The printer we have chosen can bang out tens of thousands of high quality magazines per hour and has guaranteed to have them out on the date which we specify. He has a capability of printing an unlimited number of magazines and we can therefore grow at the rate which you, our readers, are demanding.

Oklahoma, being centrally located, will permit us to travel to more Jamborees and have personal contact with many CB'ers whom we might otherwise never have known. We will be able to look through the keyholes of more manufacturers to bring you the latest design news from their files.

Of course a major problem was created in our moving — what to do with *Modesto Mike.* He has reluctantly agreed to change his name to just plain "Mike," and has also been joined by his new partner, "Oklahoma Ozzie," whose beautiful CB station appeared on our September, 1961, cover. Ozzie drove all the way to Oklahoma in his Duesenberg *Model J* mobile unit (see cover this issue) meeting CB'ers and making friends for CBH. He's already a familiar site in CBH pages and you can look for him more and more as he continues to roar through the world of CB in his 1929 Duesenberg roadster.

Remember that CB HORIZONS is willing to take *any steps necessary* to assure you, the CB'ers of America, of the finest quality publication containing the kind of news which you need and want. This move to Oklahoma is the first real growing pain we've had — we hope it's the first of many. It's in line with some exciting plans we are making for the near future based on the overwhelming success of CBH. Thanks for making all of this possible.

10-7



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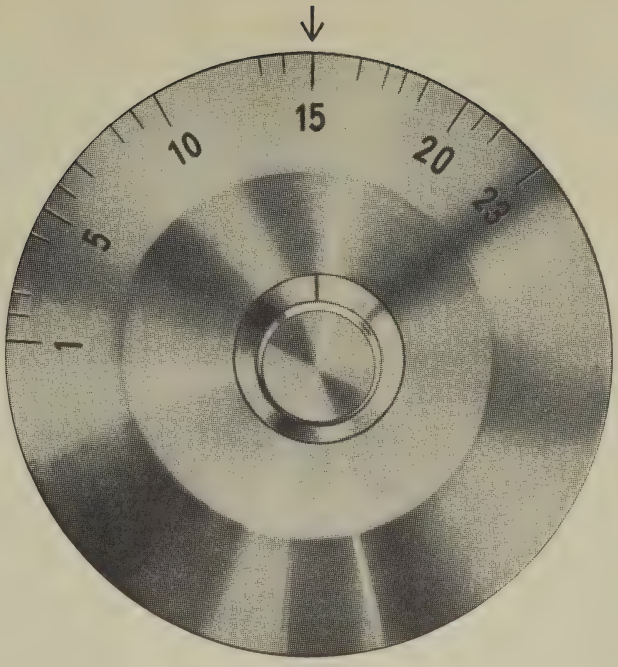
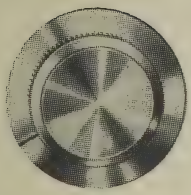
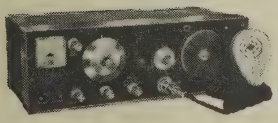




SQUELCH

CB SELECTIVITY?



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ANTENNA TOPIX

OVERLENGTH 11 METER WHIPS

By JIM GIBSON, 2W7610

Height above ground is extra-extra important with mobile operation. This simple fact has lead to the development of the roof top 'loaded whip' antenna so popular with the nation's CB'ers.

But despite the fact that roof top mounting gives you gain equal to or better than some bumper mounted ¼ wave whips, a great deal remains to be said for bumper mounted "efficiency antennas." This article will tell you a little bit about such an antenna, and how you can make a substantial (perhaps 6 db) improvement over any existing roof or bumper mount installation.

We have learned that if a whip is to load up on CB, it must be ¼ wave length, or approximately 102 inches. We have also learned that if we choose

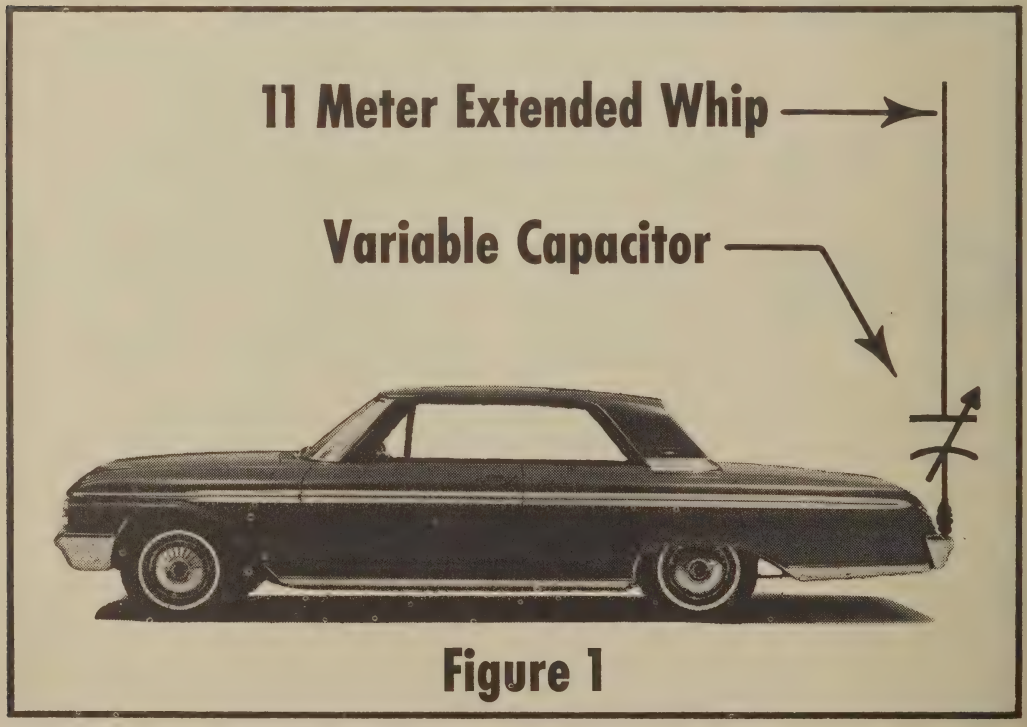

Figure 1

to use a shorter whip, we can "load" it with several turns on a coil, or "tune" it with a varible capacitor (see pages 20-21, October CB Horizons). We have also learned that by positioning the "loading coil" near the top of the mobile whip, we can effectively raise the level at which the signal leaves the whip. Obviously, the higher the signal concentration *above* ground (the car) the better range we will have.

With all of this in mind a bright young California engineer has "rediscovered" the *overlength whip* theory; a means of raising the radiation point on the mobile antenna to an even greater height above ground.

Here basically is how it works. You take a 102 inch whip (steel) and extend it to 126 inches. Now you place a varible capacitor in series with the center conductor on your 52 ohm coax (RG 8/U or RG 58/U) and *tune* the capacitor until the combination of the capacitor and the "Extended-Whip" resonates on your favorite CB channel.

Now . . this done, what have you created aside from affixing an even longer-uglier whip to your vehicle? The extra "Extended-Whip" length has effectively raised the radiation center of your antenna to the very top of the antenna (*Editor's note*: The theory gets a little complex here for the average CB'er . . but suffice to say that by using an overlength antenna and "force-feeding" it with the varible capacitor, you change the voltage pattern on the antenna and move the radiating point higher above ground). Actual on-the-air tests with this "Extended-Whip" has indicated that it not only works . . it works very well. Time and time again this antenna gets through when roof mounted loaded whips and bumper mounted ¼ wave whips can't quite cut the QRM.

For the more technically minded, here is a bit of theory by way of explanation.

The radiation resistance of the extended-Whip antenna is raised to a higher value than that of a conventional ¼ wave whip, providing a better match for the coaxial feed system, and the radiating characteristics of the antenna are improved with a resulting increase in gain of the mobile antenna. This is a direct result of lowering the radiation lobe of the whip antenna, due to increased length, and also because the high current area of the antenna

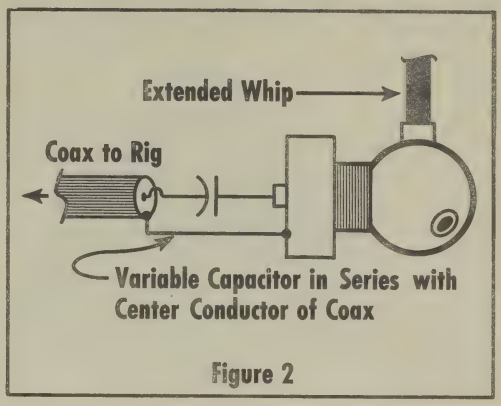

Figure 2

is farther removed from the body of the car. The overall length of the 11 meter Extended-Whip should be 126 inches for 52 ohm feed. This added length can be achieved by adding a conventional two foot extension to your 102 inch whip.

One more interesting possibility is to use a fiberglass antenna. Fiberglass antennas, because of the fiberglass characteristic, give results equivalent to 102 inch metal-whips, with somewhat shorter overall lengths (i.e. 96 inches or less). Thus an Extended-Whip, of fiberglass, would be approximately 113 inches high.

Tuning over - length "Extended-Whips" is done with the capacitor, the value of which is determined with a GDO (grid dip oscillator-see pages 20, 21 October CB Horizons). You will find that this antenna will provide a very-close match to the coaxial feed line. The antenna will also exhibit much broader band - width characteristics than most loaded whips, making it more useful over the entire 23 channels.

Give the "Extended-Whip" design a try, especially if you are dissatisfied with your present mobile-to-mobile or mobile-to-base range. You will be extremely surprised at the results! 10-7

WHY A CALLING CHANNEL?

CBH has been talking so long and so much about "Monitoring Channels" and "NATCH-9" that we felt it's about time that we spent some time explaining about the purpose of a calling channel.

Let's face it — nothing is invented without a basic need. When 11 meters became overloaded with stations it became a basic need for the stations to set aside one channel as a "common denominator" so that when a station is not actively engaged in a conversation on his regular "working" channel he can listen to see if anyone is calling him. Since it isn't practical to try to monitor all 23 CB channels, it was decided that one channel, *Channel* 9, be set aside for this purpose.

In other words, I know that if I want to get a message through to a certain station I should first try to raise him on 9, where he will be monitoring. If he's not on 9 then he's not on, or he's on and I can't get through to him.

When the contact is established then we decide which *other channel* we have in common and then switch to it for the passing of the message. This keeps Channel 9 relatively clear at all times.

When Channel 9 was voluntarily established for this purpose, many cooperative CB equipment manufacturers decided to deliver their CB rigs with crystals for Channel 9 installed in their new transceivers.

Channel 9 has now been un-officially established as the CB National Calling Channel — more commonly known as "NATCH-9."

Nobody *can* or *will* make it mandatory for a CB'er to use 9 or any other CB channel for this purpose. It's strictly a voluntary arrangement — a gentlemen's agreement — between CB'ers. If you participate, fine; if not, fine. It's *your* equipment and you have every legal right to have full access to any and all CB channels. However your cooperation with NATCH-9 will no doubt improve your communications and the communications of other CB'ers in your area.

NATCH-9 has given rise to a fad which has been reported to CBH from several different parts of the country. Inasmuch as it seems to be gaining popularity and has a genuine value, we thought you would like to know about it to consider it for your own use.

In order to promote the use of any NATCH-9, CB'ers have taken to painting the top 6 inches of their mobile antennas a bright yellow-orange — the same color used for aircraft marking, sometimes called "Fire Orange," "Blaze Orange" or *"International Orange."* It's a bright irridescent color which really stands out.

With your antenna so marked, there will be no doubt to passing CB'ers that you support the courtesy channel and are probably monitoring it. Besides this, the color-job will have it's obvious advantages of letting you pick out your car from the rest in a parking lot (except at a CB convention).

This yellow-orange is available from several sources, although we understand that it's readily available under the "Switzer Brothers" brand, which comes in an aerosol can. $3 worth will enable you to work-over every mobile rig in your county. Airports or aircraft suppliers should be able to obtain this color without difficulty.

Here's a few hints on doing the paint job. Measure 6 inches down from your antenna's tip and mark the spot with several turns of "masking tape." Take a piece of newspaper and jam it down over the tip of the whip, bringing it to just below the 6 inch marker — this will eliminate the possibility of paint droplets drifting down to your car. As soon as you have finished applying the paint, pull the newspaper towards you to remove it from the antenna (don't lift over the wet paint). When the paint dries, remove the tape. 10-7

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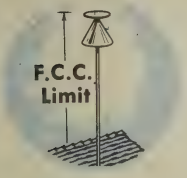

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New for you . . .

REGIONAL WORKING CHANNELS!

By ROBERT B. COOPER, JR. 12Q2339
Publisher-Horizons Publications

There comes a time in each and every field of endeavor when an area of mass agreement within the field must be achieved. *That time is now in Class D CB radio.*

Elsewhere in this issue you have read the importance of maintaining a national calling channel. Channel 9 has been informally accepted and adopted for this use. Of course in adopting channel 9 as a National Calling Channel we all recognize that no-one, *who is in agreement with the National Calling Channel* (9) policy, should use the channel at any time for anything other than calling. This immediately means that we all have either a crystal position to receive channel 9, or leave our tunable receivers on 9 when we are not otherwise occupied. Here then is the rub. If channel 9 is used properly, it should be as quiet as channel 3½! If channel 9 is utilized only for calling, and is then cleared immediately after contact is established and a second channel of operation agreed upon, how does a road traveler in a strange region obtain directions and regional help without tieing up channel 9? Since channel 9 is the only *nationally agreed upon* channel, which every CB'er everywhere is likely to have in his set. What hope does a stranger have of "happening to have" the local *monitoring* or *working* channel, in his rig? Not much. If you disagree, wait until you see the 1962 Call-Book (out in January) which lists over 2,000 towns, cities and areas in the country, using all 23 channels—in no particular order or fashion!

But back to the question. If the road traveler doesn't 'happen' to have the correct localized working channel crystal, where does he go to work the station he has contacted for the purpose of obtaining local directions? If he wants the directions badly enough, he stays on channel 9, tieing up the channel and defeating its purpose.

So where do we go from here? CB Horizons has given this problem a great deal of thought. We talked the problem over with Clyde Moore, 9W0219, our roving Editor-at-Large, who we felt having traveled a good share of the nation talking with and meeting CB'ers, would be in a position to give some advice. Clyde's advice was:

"CB radio needs a system of 'regional calling and working channels' aside from NATCH-9, which is nationwide for calling only. The system set-up should be simple to remember, and make sense to the CB'er in the field."

With these sage words of advice, CB Horizons proposes the following plan of *Regional CB Calling and Working Channels.*

Within each CB call-area one channel will be set aside as a working and/or calling channel. Anyplace within that call-area the traveling CB'er will know that he can switch to *that* channel for local information. Recognizing the need for such a working and/or calling channel is the first problem. Working together, CB clubs and individual CB'ers is the only way such a system will prove effective and workable.

Once a local station has been contacted on the nationally recognized channel 9, both stations should switch to the 'Regional Channel' for the actual relaying of information.

How do we know what regional channels are in use in a given call-area? *Simple enough!* If you are in the 18th call-area, it's Channel 18. If you are in the 11th call-area, it is Channel 11, or if you are in the 7th call-area, it will

ANNOUNCING NEW BROWNING 23/S-NINE CB TRANSMITTER

23/S-NINE TRANSMITTER

$144.00 (with one crystal)

$189.00 (with 23 matched crystals installed)

Now with built-in 23 channel selector switch and Standing Wave Indicator!

Browning presents a new concept in Citizen's Band radio communications. It's the 23/S-NINE base station transmitter with built-in all-channel selector that lets you transmit on any of the 23 CB channels *at the flick of a switch!* Also new is the built-in Standing Wave Indicator for perfect matching of transmitter and antenna system for more powerful, long-range transmissions.

Among other outstanding 23/S-NINE features: special audio circuitry with speech clipper and splatter filter for perfect modulation; advanced design power supply with silicon rectifiers for low operating temperatures and maximum component life; highly efficient output circuitry using Pi network for maximum transfer of energy to antenna.

Order your Browning 23/S-NINE Transmitter now for home or business use.

Send today for FREE CB Information Kit: 105 UNION AVENUE, LACONIA, N.H.

browning

FOUR CONVENIENT PURCHASE PLANS

be Channel 7. In other words, whatever call-area you are in . . that is the channel number for regional calling, up to Channel 22 which is Puerto Rico and the Caribbean. Alaska, which is the 23rd call-area, will share Channel 22 for regional calling with Alaska. There is seldom if ever skip between these two call districts. 24 call-area stations (Washington, D.C.) will operate on Channel 4 for regional calling, as the area around D.C. is the 4th call area. Ninth call-area CB'ers would use Channel 10.

What are the advantages to such a system, and why should *you* add a regional-calling-channel crystal or set or crystals in your set? Here are some of the many positive benefits. If we respect the regional-calling-channels as we do channel 9, then that channel will be available for truly useful service even in the face of extensive growth in the Class D service. This means business and commercial users should try to operate on any of the 23 channels *except* channel 9 and the local regional working c h a n n e l. Because there are sufficent CB channels (23) to meet the requirement of a regional working channel in each of the 24 call areas, skip interference on important messages should be virtually eliminated. For example, channel 1 users (in New England) a r e habitually bothered by skip from stations in the 6, 7, 8, 9, 10 etc. call areas. Since none of these call areas will be using channel 1 as a regional-working-channel, there is less chance for message mix-ups between call areas.

Of course the most obvious advantage to such a system is the fact that whenever you go into a strange region, you will automatically know that if you have two basic crystals in your rig . . one for channel 9 and one for the regional working channel, you should have 99 percent of the 'contact problem' conquered. This alone is reason enough to see every CB'er in the nation adopting this plan immediately. Let's get the ball rolling during the winter so that next summer's traveling time will be more pleasant for all of us!

10-7

DISCONE

(*Continued from page* 11)

At channel 23, things were back up to 1.15 to 1.

When the antenna was first hooked into the lab receiver, we were sure we had drawn a blank. Receiver noise, which rides S4 on our lab standard antenna, registered only S2. "A-ha" quipped one of the boys . . . "this antenna is so poor we don't even hear the power lines and car ignition pulses'." But nothing could have been further from the truth. True, the receiver noise pick-up was down. Way down, by some 12 db. But the signals were there! We don't have an explanation for this one yet, except to note that perhaps the radiation angle of the antenna is such that the passing autos and overhead power lines are phased out. A nice problem to have!

Skip is always a popular subject. So bright and early Saturday morning we were down at the lab firing up the equipment. For 60 minutes we listened on the Discone, hearing only an occasional ground wave local, and figuring that the band hadn't opened up for skip yet. Finally around 8:30 we switched to the reference antenna and were promptly knocked out of the lab by an 19A in Ohio. We don't want to draw any conclusions here . . . yet. We are still working on that one.

Raw Looking

The photos probably have you a little baffled. The antenna Cliff Hart, Stinger Corporation President sent up to us, was his own design-original. It had been constructed from raw steel, and admittedly was a little heavy to handle. We managed to cut a few fingers on the un-filed edges and said a few unkind things about Cliff when attempting to get it mounted. Not all of the parts fit perfectly, but please understand that this was an engineering proto-type, not a saleable product.

The final production product, we are told, will have the following characteristics. It will be constructed from vacuum molded plastic, colored

(*Continued page* 33)

NOW!

You Can Afford A 3 Element Beam!

Look:

* *9.5 db forward gain. (Effective input of plus 40 watts!)*
* *Optimum spacing on a 12 foot boom.*
* *7/8" and 3/4" telescoping elements of finest grade seamless aluminum.*
* *Aluminum castings to support elements.*
* *Adjustable gamma match feed system to match any standard coax cables.*
* *Our Model 3L27, CB'er net price only*

$29.95, *f.o.b. factory.*

WHOLESALE SUPPLY COMPANY

Lunenburg, Mass.

ADD DUAL CONVERSION

By GIL ALEXANDER, 2W6264

If you are one of the many CB'ers who have a moderately priced rig such as the Lafayette HE-15A, you are all to familiar with the problem of receiver selectivity. On the crowded CB channels, adjacent channel interference is a common occurrence. Strong signals are picked up even though they are transmitting several channels away from the one tuned in. This is due primarily to the broad i.f. bandpass found on these receivers. The ability to receive a signal through interference depends upon the receiver selectivity.

The *Bainbridge Dual Conversion Adapter* described herein will markedly improve the selectivity of your present CB receiver. This is accomplished by narrowing the receiver's i.f. bandpass. Results: if you are tuned to channel 8 and a strong local signal transmits on channel 9, you will detect only the slightest trace of 9, and any signal on 8 will override this slight trace. The adapter also increases the sensitivity of the receiver, thus enabling rural and suburban operators to increase the listening range of their receivers. Though given added selectivity and sensitivity, the adapter does not cancel any normal set functions. The addition of separate controls or switches are not necessary.

The adapter is inserted between the receiver's last i.f. and detector stage. (see block diagram). A signal coming from the tranceiver's last i.f. is fed directly into a mixer-oscillator. The converted signal then goes to a 262kc i.f. amplifier, and finally back to the detector in the receiver. Your transceiver now has all the advantages of dual conversion. The signal is first converted to a high i.f. to discriminate against images. Then converted a second time to a low i.f. for high adjacent channel selectivity.

Inasmuch as the oscillator in the adapter can be tuned over a very wide range, the unit can readily be used with almost any CB rig.

Our Bainbridge unit was installed on a Lafayette HE-15A. The dual conversion adapter which comes in kit form, is complete with all parts, punched chassis, wire, pictorial, and instructions for easy alignment. The adapter is assembled on a small aluminum box, and is normally mounted on the rear of the transceiver cabinet, though position is not critical. A 7-wire harness is used to connect adapter to receiver. The harness is inserted through a grometted hole drilled on the rear apron of the transceiver chassis. A notch is cut on the back plate to correspond with hole.

That's all there is to it.

Results obtained with the adapter

(add 5¢ per crystal for postage and handling)

CITIZEN BAND
CLASS "D"
CRYSTALS

3rd Overtone: Hermetically Sealed .005% tolerance—Meet F C C requirements, ½" pin spacing—.050 pin diameters. (.093 pins available, add 15¢.)
ALL 22 FREQUENCIES IN STOCK!
$2.95 EACH

The following Class "D" Citizen Band frequencies in stock (frequencies listed in megacycles): 26.965, 26.975, 26.985, 27.005, 27.015, 27.025, 27.035, 27.055, 27.065, 27.075, 27.085, 27.105, 27.115, 27.125, 27.135, 27.155, 27.165, 27.175, 27.185, 27.205, 27.215, 27.225.

Matched crystal sets for Globe, Gonset, Citi-Fone and Hallicrafters Units . . . $5.90 per set. Specify equipment make.

RADIO CONTROL CRYSTALS
in HC6/U HOLDERS—SIX FREQUENCIES

In stock for immediate delivery (frequencies listed in megacycles); tolerance .005%. ½" pin spacing. .050 pin diameter. (.093 pins available, add 15¢ per crystal.) Specify frequency.

26.995, 27.045, 27.095, 27.145, 27.195, 27.255 ..... $2.95 EACH

(add 5c per crystal for postage and handling)

ASK YOUR PARTS DEALER FOR TEXAS CRYSTALS

See big red display . . . if he doesn't stock them, send us his name and order direct from factory.

Send for FREE CRYSTAL CATALOG #860 WITH OSCILLATOR CIRCUITS

Now! Engineering samples and small quantities for prototypes now made either at Chicago or at Ft. Myers plant. 24 hour service!
CHICAGO PHONE GLadstone 3-3555

All orders Shipped *1st Class Mail*. Rush order to:

TEXAS CRYSTALS

DEPT. H-121, 1000 CRYSTAL DR., FORT MYERS, FLA.
For fastest possible service, Phone WE 6-2100

were excellent. There was substantial signal improvement, but more important it produced razor sharp selectivity right across the band.

Here is the Bainbridge Dual Conversion adapter attached to a Lafayette transceiver. The unit may be attached to any single conversion rig to add "that certain something."

The *Bainbridge Dual Conversion Adapter* at $16.95 is a worthwhile addition to your CB rig. **10-7**

Season's Greetings
from the
Horizons Family
to yours!

Thank you for helping to make this a great year for us!

Bob	Stan
Tommy	Jackie
Dee	Bonnie
Carlyne	Clyde
Art	Gardiner
Jim	Rex
Herb	Judy
Ozzie	Mike

CB TECH TALK

ADD AN S-METER TO YOUR CB RIG

By HERB FRIEDMAN, 2W6045
CBH Eastern Technical Editor.

As many CBers have learned or are learning, the S-meter can be a very handy device. When letting the other fellow know if he's getting out there is nothing to beat the S-meter; it not only provides an indication of relative signal strength, it also provides a day-to-day check on performance — and it permits you to tune a station "on the nose", eliminating a lot of sideband hash.

Let's take a quick Zig (or Zag) and see what started the S-meter and what it does.

Back in the old-old days, before radiotelephone, "S" was part of the radio-telegrapher's signal report. The "S" scale ran from 1-9, with S9 representing, "The strongest signal on the band." The operator actually tuned the band, so if he said you were S9 you knew you were strong.

With radiotelephone and the superheterodyne receiver came the S-meter.

Basically, a meter is placed in the i.f. (and r.f.) screen and plate circuit. Since the i.f. amplifiers are controlled by the a.v.c. which is proportional to the received signal strength, the current flowing in the i.f. amplifiers changes and this change is indicated on the meter.

The early S-meter followed the radiotelegraphers scale, being calibrated from S1 to S9. With the improvement in receiver sensitivity and standardization of the S9 antenna input voltage the S-meter scale was expanded over S9 to the now familiar scale. Today, S9 usually represents an antenna input voltage of 50 microvolts — each S unit representing a 6 db change in signal strength.

In response to your letters, CBH offers you an inexpensive and easy to build add-on S-meter. The CBH S-meter uses no tubes and therefore requires no extra power for operation.

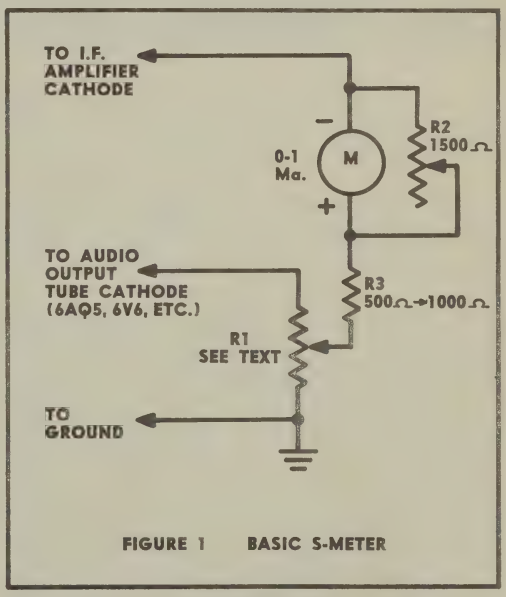


FIGURE 1 BASIC S-METER

PARTS LIST

R1 Wirewound potentiometer equal to audio output tube cathode resistor or 500 ohms. (see text)
R2 Potentiometer, 1500 ohms
R3 Resistor, 1000 ohms, ½ watt (see text)
M S-meter, Lafayette Radio TM-11
Misc.
Cabinet
Three wire plug and jack
Three wire cable
Knobs

Construction

Figure #1 shows the S-meter circuit which uses easy-to-obtain parts; the meter (M), the zero set (R1) and the sensitivity control (R2) are mounted on the main panel of a 3¼ x 2⅛ x 1⅝ inch *Minibox*. In order to make the parts fit without creating a "parts jam", M, R1 and R2 are mounted in the exact center of the three sides of the main panel. The specified meter mounts in a 1½ inch hole which can be made with a standard radio chassis

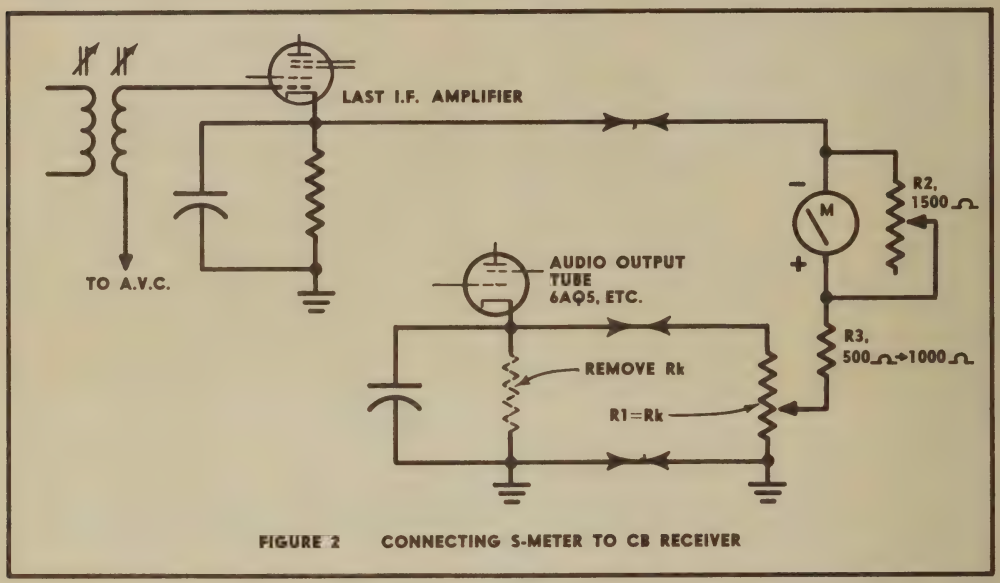


FIGURE 2 CONNECTING S-METER TO CB RECEIVER

punch.

If you are not familiar with close-quarter wiring, we suggest you use the next size *Minibox*.

The wiring is not critical, and if you want to change the layout go ahead and do it. To simplify servicing and/or removal of the chassis, the S-meter should be connected to the transceiver with a three circuit plug and jack. The *Amphenol* type 71 plugs and type 78 sockets cost only pennies and they are very easy to mount and connect.

The S-meter is connected to the receiver as shown in Figure #2. R1 becomes the audio output tubes cathode resistor (Rk), therefore, Rk must be removed. When R1 is connected in place of Rk, some juggling of resistor values will have to be done. Obviously, since potentiometers come in definite resistance steps, you cannot exactly match a cathode resistor of say, 470 ohms. However, the resistors usually used have a 10% tolerance and a 470 ohm resistor can actually read 517 ohms; therefore, the 470 ohm cathode resistor could, in many instances, be replaced with a 500 ohm pot.

Adjustment

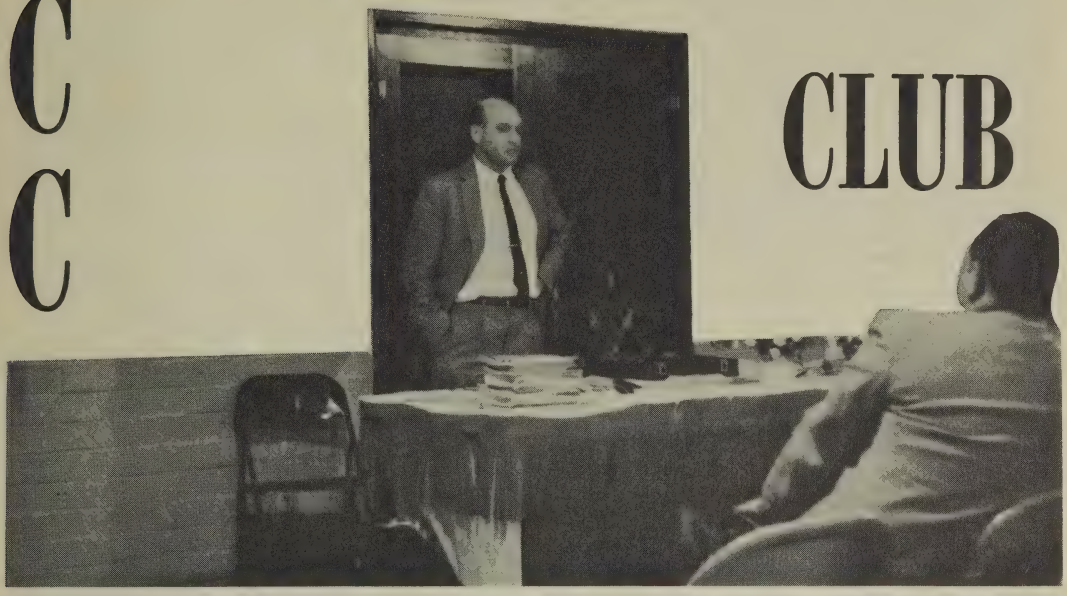
Tune in a dead channel and adjust R1 for zero meter indication, then tune in a very strong local and adjust R2 for an S9 reading.

If the S-meter reads low, even on a strong signal, R3 can be reduced to 500 ohms. The S-meter is self-limiting and it is virtually impossible to "pin" the needle.

How It Works

R1 is set so the voltage at the center arm (the meter positive) is equal to the no-signal voltage developed across the i.f. amplifier cathode resistor (the meter negative), therefore no current flows through the meter. When a signal is received, the a.v.c. voltage reduces the current flow through the amplifier, thereby lowering the voltage drop across the i.f. cathode resistor and causing current to flow through the meter; the stronger the signal the higher the a.v.c. and the higher the S-meter reading. 10-7

FCC VISITS LOCAL CLUB



You may or may not be aware of the fact that the FCC is quietly conducting its own "People To People" program—complete with a special *Peace Corps*. The idea behind this program is to tear down any artificial barriers which may exist between CB'ers and the Commission—to form a better understanding between the CB'er and (lest we not forget) the folks who gave us the band.

The FCC wants to accomplish several things with this program: (1) To erase the misconception that the FCC is out "to get" the CB'ers, and (2) to help the CB'er better understand what is expected of him under Part 19.

As a case in point, the CB club in Modesto, Calif., inquired if their local FCC office (in San Francisco) could clarify some tricky problems they were having. Before you could say "ground plane," the FCC had fixed up the Modesto group with an appointment for the Assistant Engineer in Charge of the Radio District to give an informal talk at the club's next meeting.

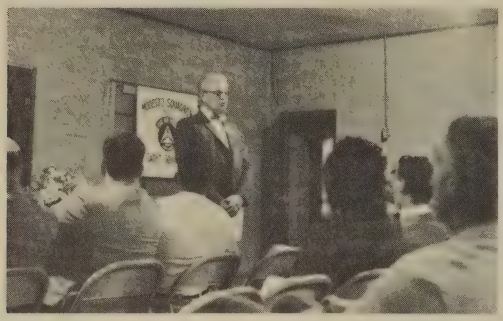
In anticipation of the meeting the club had wisely sent out post cards announcing the FCC guest—sent them to CB'ers in the adjacent counties too, whether the CB'ers were members of the club or not.

When the day of the meeting arrived the clubhouse was packed to the rafters with eager CB'ers. Sure enough, right on the minute of eight o'clock, in walked Ney Landry of the FCC's San Francisco office—briefcase and all.

As soon as the formal introductions were over Mr. Landry opened his briefcase and got down to business. Surprisingly enough he wasn't the ogre that many of the fellows had expected, he turned out to be a friendly and understanding guy with a pleasant sense of humor which immediately put everyone at ease. He spoke for about an hour and a half on the CB service—its rules, regulations, uses (both proper and improper), and its technical requirements. After the talk there was a question period at which time Mr. Landry polished off some of the points in question which hadn't been covered in his talk, and also discussed further some of the things about which the gang wanted

additional advice.

After the meeting the entire group was treated to coffee and doughnuts which were furnished by the Modesto



First speaker of the evening was Bart Pearce, 12W4428, President of the local CB club in Modesto, Calif.

Squadron of the Civil Air Patrol (who also loaned the meeting hall).

Certainly this was a plus for the FCC with the CB'ers in the Modesto area. There was no longer that indefinite feeling of hostility which one often finds toward the FCC in many clubs and no one could deny that many points which were unclear in Part 19 were now clearly understood.

This is not an isolated case as many CB clubs throughout the nation have also called upon the FCC for informaiton and found themselves plus one speaker for their next meeting. This is a good program for your club to consider. Besides gaining the knowledge

Next speaker was your editor, T. K., who introduced Mr. Ney Landry.

which the FCC has to depart you also have the advantage of luring many prospective members to your meeting.

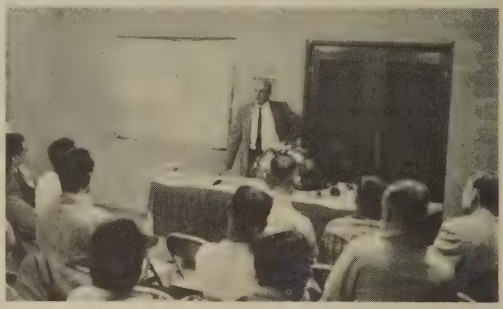
We thought that you'd be interested in some of the questions and answers which were discussed at the meeting so we wrote them down and reproduce them here:

QUESTION: *How far can the CB'er go with modifying his equipment himself?*

ANSWER: The rules permit you, for instance to take a kit and assemble it yourself although you do not hold a license. Essentially it boils down to this, any work on the equipment in tuning or adjustment that can cause you improper operation should be done only by a person who holds a second class FCC operator's license or better. He would check the equipment out when he finishes working on it to see that it is operating properly.

QUESTION: *This includes the transmitter itself doesn't it? Do modifications of the receiver or modulator need to be handled in this manner?*

ANSWER: You could make any



Main attraction of the evening was Mr. Ney R. Landry (Amateur W6UDU), Assistant Engineer in Charge of the 12th Radio District.

changes you wanted on the receiver all by yourself—it's just the modifications on the transmitter which might affect its operation in any way that you must watch. By the way, although an Amateur Radio operator may be perfectly qualified as far as technical knowledge, he cannot do any service or maintenance on your transmitter unless he also holds the proper class of commercial license. If he did this work with only his Amateur license he would probably lose the license.

QUESTION: *Two or three fellows in the club keep a log of their CB transmissions. Is there any advantage to this?*

ANSWER: You do not have to keep a log, although if you have service or maintenance work done you should keep a record of it. As far as the FCC is concerned, a day-to-day operational log is not required. 10-7

T. K. TAKES A TRIP

Your Editor took an interesting trip "back east" for two weeks towards the end of October. The trip, originally planned for early November, was moved up at the last minute due to the company's decision to print the January issue of CBH in Oklahoma City.

Our first stop was Oklahoma City to work on the CB Call Book with the printer. While in town we spent a day with George Beyers, 10W0376, of *International Crystal Mfg. Co.*

We finalized the arrangements for a special booklet which CBH is furnishing to *International Crystal* on the proper use of a CB station. The booklet, called *"Only As Good As You Make It,"* was written by CBH especially for *International* and will be included in all *EXECUTIVE* units shipped by *International.* It will also be given with each of the company's new 1962 catalogues (if you want one, write to Uncle George, 10W0376, 18 North Lee, Oklahoma City, Okla. They're free).

After Oklahoma City we flew to Chicago where we spent a drizzly, snowy day with Jack Craven, 18A6811, of the *James Knights Crystal Company* in Sandwich, Ill. Jack took us through their large plant and showed us the various steps used in making JK crystals.

We spent that evening with Tom Vastine, 18A4885, Director of Public Relations of Chicago's *Citizens Radio League.* We sat around with Tom, puffing on big *seegars,* discussing some of the problems which Chicagoland CB'ers are facing.

The following day was spent with Jim Ryan, 18W5166, Sales Manager of *Mark Mobile,* Inc., makers of Heliwhip CB antennas, among other things. Jim had quite a bit to say about antenna gain claims in ads and we are prevailing upon him to do an article on the subject for CBH.

Next stop was Washington, D.C. where we had interesting discussions with Bill Grenfell, Dick Everett and other FCC officials. Some of the Commission people with whom we spoke have definite and positive ideas on how to straighten up the band in areas where there are excessive and continuing violations of FCC regulations. While there are apparently no pending actions to change existing CB regulations, the FCC people told us that they are "always considering new ways to improve the various radio services."

After Washington we hit the New York trail—we used to be 2W1965 and it was good to be home for a few days. While in town we spent some time with Jules Rubin, National Advertising Director for *Allied Radio* (of Chicago), and with several old buddies from our New York publishing days. We also chatted briefly with Ron Levine, 2W1482, of *Polytronics* and Irwin Sussman of *ECI Electronics Communications, Inc.*

A number of times during the trip we had occasion to eyeball-QSO CB'ers in the various cities which we visited — in fact we sat next to a CB'er on the Jet from Chicago (he recognized us from the pictures which have appeared in several issues of CBH). Everyone seemed pleased with our efforts to bring the CB'ers a nationally distributed *professional* quality publication. This was especially heartening in view of the fact that there are a flood of amateurish *commercially distributed* "newsletters" or "newspapers" floating around the country largely containing material lifted from magazines (including CBH) and club bulletins.

10-7

NEW CB PRODUCTS OF THE MONTH

Several new products to talk about this month so let's get right to business.

Hammarlund (460 West 34th St., New York 1, N.Y.) leads off with a convenient variation of their HQ-105TR CB rig. The new addition to the Hammarlund line is known as the HQ-105TRS

and differs from the regular HQ-105TR in the respect that it has a loudspeaker installed in the spot where the clock goes on the regular model.

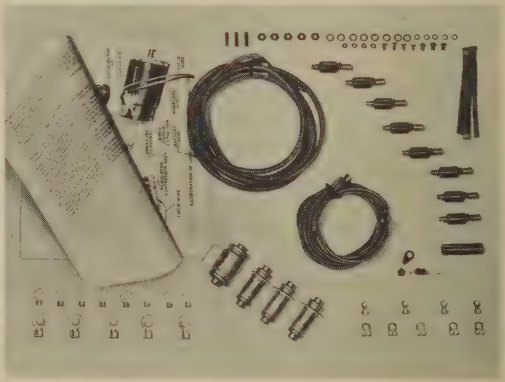
The Hammarlund rigs enjoy the unique distinction of being the only CB transceivers on the market that offer a full-coverage high quality shortwave communications receiver built right in. This means that in addition to being able to "hear 'em all" on 11-meters, you'll be able to listen on the standard broadcast band, the marine bands, every ham DX band, the international broadcasting bands, and the aero bands. If and when you take out a ham ticket this rig has saved you half the cost of getting your station together.

While we're at the transceiver end of the coax here are some interesting facts about the Turner 350C microphone. Turner (925 17th St., N.E., Cedar Rapids, Iowa) claims that the 350C is now

used as original equipment on more CB transceivers than any other microphone.

Just in case you're one of the 3 CB'ers in the country who aren't familiar with the 350C, here are the specs: Ceramic type with 80 to 7000 cps response. Output of-54 db. It is furnished with an 11" to 5' coiled cord and a hanger button and standard dash bracket. Write to Turner for some interesting literature on this one.

Got a *spark-gap* transmitter in your



car? If your vehicle's ignition system is kicking up a fuss with your CB com-

munications, here's an easy *and inexpensive* way of batting down the assorted whines, crackles and hash — it's E. F. Johnson's (Waseca, Minn.) new *Ignition Noise Suppression Kit.*

The kit includes an illustrated booklet with detailed instructions, and also all necessary hardware and fittings for complete installation by a *do-it-yourself*-type CB'er.

The Johnson kit supplies effective noise suppression by shielding the wires carrying noise signals, by a resistor-condenser combination on the generator and distributor to suppress arcs; and in the spark plugs, resistors are inserted to block the transfer of rf energy back to the car wiring. Shielded cable is also used extensively in the noise suppression kit. Costs about $14.

Hi-Par Products (347 Lunenburg St., Fitchburg, Mass.) announces their new CB ground plane. The unit is of con-

ventional design but incorporates an adjustable "gamma match" feed system. It is made entirely of high grade seamless aluminum tubing with stainless steel fasteners. You can have it on your roof for *less* than 17 bucks.

The CBH Lab Reports . . .

WE TEST

- ★ Auto Noise Filter
- ★ ECI Courier—1
- ★ Cesco Duo-Pole
- ★ Kaar TR-327
- ★ Ant. Specialists Magnum-27

AUTO GENERATOR NOISE FILTER

This is a miniature review for a miniatureized product. As this is a mobile issue for CB Horizons, it follows that this would be a mobile type review.

During the course of researching products for this issue, CB Horizons happened onto the Ben N. Bartlett automotive generator noise filter. Now, noise filters for auto generators are not new. However relatively few CB'ers know what they do or why they are helpful.

The filter consists of a coil and condenser combination, working as a tuned circuit, which acts to "trap-out" signals in a particular frequency range. Were you to place this tuned trap in series with your coax line from your antenna, you would discover no more 11 meter signals!

It follows, then, that to put it on the generator output post, it will eliminate generator noise which appears in the 11 meter band. We did just this, and it did just that!

Installation time is approximately 3 minutes. Results are all that they should be. Generator whine goes way down allowing you to hear the signals previously masked by the annoying generator whine. The Ben N. Bartlett filter (write to Ben at 1815 W. 85th Street, Los Angeles 47, California) costs you $3.00 post-paid. It is pretuned to the 11 meter band, and is sealed against moisture and dust with some type of spray that only Ben knows the formula for. Complete instructions are in the box. So what are you waiting for?

Editor's note: Last month's review of the ECI COURIER wasn't helped by the printer, who apparently misplaced a part of the article as it was originally written. In an effort to correct the error, we herewith are re-running the entire review as the few lines which were misplaced wouldn't mean much out of context, but do complete the picture of this rig.

REVIEWING THE ECI COURIER-1

By Herbert Friedman, 2W6045
CBH Eastern Technical Editor

After having our appetites whetted by advertising and rumor, we finally got the chance to test the ECI Courier I ($189.50), and we must say we were not disappointed—it's quite a rig.

The heart of the Courier is the receiver, which in every way performs as a top quality communications receiver would. The Courier is variable tuned or four channels fixed tuned. The dial is precision calibrated for *each* channel, making pre-set tuning dependable. Drift free triple conversion is used, with the first conversion oscillator crystal controlled. The final IF amplifier is two stages of 262 kc., resulting in selectivity which is phenomenal. When the Courier receiver was tuned to a channel 9 signal generator delivering an S2 signal (on the Courier's "S" Meter), there was no CB signal on channel 8 or 10 which interfered, and the 8 and 10 signals were running S-9.

To prevent overload from mobiles "parked under your window," an RF gain control is provided. The squelch has a "medium speed action," it can be set so that if you desire, a slight background noise will always be heard.

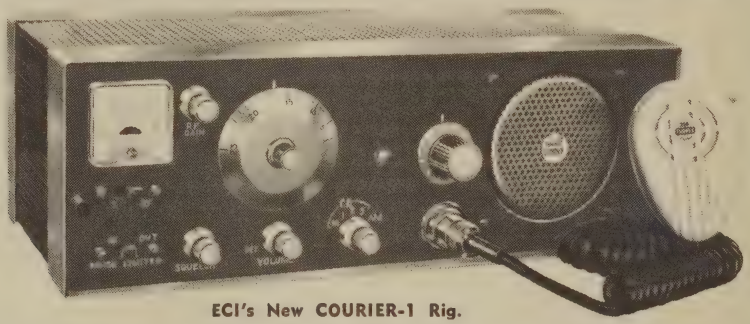
The noise limiter, which has an on-off switch is very good. The receive audio quality is very clean and sharp.

An unusual feature is fixed channel reception using no crystals. There are four trimmer capacitors which can be preset to any desired channel; in addition, the fixed tuning is front panel variable ± 2.5 kc. With the transmitter "on," the trimmers are adjusted for maximum S-reading to the signal being transmitted. This is a good feature considering the crystal costs saved.

The twelve channel transmitter is as good as the receiver. When checked with our SECO 510, the transmitter delivered considerably over three watts. (We didn't believe it so we checked with a Bird wattmeter and got a reading of 3.6 watts.) Modulation was very clean to 100%.

The Courier's S-meter doubles as a relative power meter, permitting you to tune-up the transmitter to maximum output without the need for external indicators.

From hearing all of these features you could possibly assume that the COURIER I is strictly a base station—this is incorrect! It will no doubt come as a surprise to you that the COURIER I was designed to be used either in a fixed location or as a mobile unit, and it makes one heckuva mobile unit.



ECI's New COURIER-1 Rig.

The power supply operates off either 117 volts a.c. or 12 volts d.c.

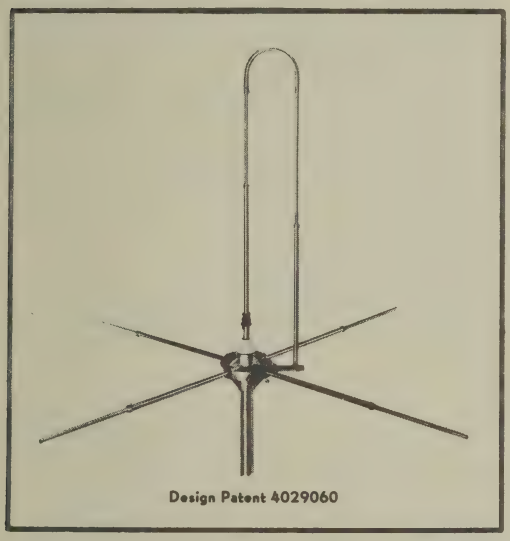
The unit also features a unitized chassis, that is, five separate and individual sub-units all wired together to complete the final rig on one chassis. The whole deal slides out of the cabinet on tracks for ease of servicing.

Our conclusion: A rugged, excellent transceiver in all aspects; well suited because its receiver for use wherever dependable communications are necessary over an extended range or under severe QRM conditions.

CESCO DUO-POLE GROUND PLANE

Preparatory to the CB Horizons move to Oklahoma City Editorial Offices (see separate story, this issue), our Modesto test-lab roofline looked like the proverbial porcupine. Reason? We were attempting to clean up Modesto lab tests on a number of antennas which had been shipped our way during September and October.

Of the many antennas in test during the closing weeks in the west, one in particular seemed to attract the attention of the always present visiting CB clan. This was the CESCO Duo-Pole ground plane.



Yes—it is a bit unusual in appearance. One CB'er described it as a *"crab lying on his back playing the trombone."* The accompanying sketch tells the story for those who haven't yet seen this antenna.

Manufactured by *Continental Electronics and Sound Company (CESCO)* at 6151 Dayton Liberty Road, Dayton 18, Ohio, it may just be that the Duo-Pole was just foreign to the west.

Pulling the unit from its heavy packing carton, our chief antenna installer had this one mounted and loaded to the bench transmitter in 45 minutes. Our test model arrived pruned and tuned for channel 11, 27.085 mc/s. A quick SWR check showed the antenna to have a flat response, with 1.1 to 1 on channel 11, sloping off to 1.25 to 1 on channels 1 and 23.

The Duo-Pole mounts quite high, mainly because its vertical radiator section is folded back (see diagram) to form a "trombone arm." This means that you can mount the base of the antenna on a 10 foot mast above your roof, and still be legal. This extra height could be very helpful under conditions of nearby trees and buildings. The antenna itself, fully assembled, stands just under ten feet high.

Mounting and tuning the antenna is a fast operation. The trombone and radial elements are factory marked for channel 11, and you need only pull them out to the pre-marked spot, and cinch down the set screws. The mounting of the base on a 1¼ inch standard TV mast is made considerably easier by the specially designed cast base. Your coax feedline is soldered directly to the terminals provided under the cast base, and the coax run down through the mast piece. This makes a very weathertight arrangement.

The antenna is exceedingly rugged, although light in weight. It is well designed and carefully engineered.

We found our model to perform equally well in all directions, or in other words, the pattern has no dead spots or peaks. Range wise, it pushed our bench standard transmitter signal out to 20 miles with no particular effort.

The antenna is recommended as a good buy at $29.95 for those who want a rugged-good performance base station antenna, with a minimum of fuss.

KAAR TR 327B TRANSCEIVER

CB Horizons is a busy place. People run in and out of our offices all day long, and often far into the night, looking busy and doing chores which in the final analysis provide you with a magazine every month.

Most of the office staff came to work not knowing a CB radio from an overstuffed leather chair. But as they worked for the publishing company, the value of two-way radio began to take its toll. For example, when production girls skip across the street to the printer, they carry handie-talkies so as to be able to ask questions of their editors when they get to the

printer.

But what with CB sets, antennas and meters arriving by the bushel basket full almost daily (from manufacturers who want us to test this, or that), personnel interest in specific CB sets, or antennas, never seems to run too high. But here is an exception.

Its the KAAR Engineering Corporation model TR 327B "D-Phone" which

arrived in our offices in mid October. From the instant the handsome two-tone grey set was unpacked from its carton, office girls and editors began to gather around. Publisher Bob Cooper had the set on his desk for a short while, until the constant traffic from office personnel "to see the set" became too much for him.

It seems that everyone wanted to "borrow the TR 327B overnight!" When it came time to test the rig in the lab, we had a devil of a time chasing it down. One of the girls summed it up when she remarked "its just too pretty to be a CB radio."

KAAR, apparently, is used to such raves. The KAAR line won the WESCON and Alcoa design award this year because of its outstanding appearance.

OK you say . . so it looks good. But you plan to throw *your* new CB transceiver under the dash of your 1936 pick-up truck where grease and oil will soon have it covered with dirt and grime. And you couldn't care less!

Well now . . about its electronic circuits. Five transmit channels, tunable receiver. A multi-purpose meter on the front panel which tells you how strong the received signal is (calibrated in units from 0 to 10), and a "tune-up" control that allows you to peak your transmitter to peak output. The tunable receiver is among the most accurately calibrated we have tested. And here is something we really liked. A squelch circuit that really squelches! Positive, sure footed and immune to almost everything except signals.

Our test unit arrived with two crystals, one for 9 and another for 11. Both channels measured equal in output on our wattmeter-3.1 watts. When modulated, the output swung up just enough to make the needle quiver.

The TR 327B is available for 6 or 12 vdc, and the standard 110 vac. Separate power cords are used for AC and DC operation. It's $189.00.

As an extra plus, you can buy the TR 327A with AM radio added, $199.00.

The TR 327 with 4 position crystal controlled receiver is $179.00.

MAGNUM M-27

When a new antenna appears on the market these days, it had better be good, or it won't last long. Witness the more than 50 base station type antennas available to the CB enthusiast. How many can you name? Probably they could be counted on one hand.

The M-27 was first introduced in August of this year. A recent flyer from the company noted more than 6,000 had been sold in the first 60 days of the antenna's availability.

Clearly - CB Horizons could not ignore such acceptance of a product!

So we ordered our M-27 and up it went to the testing lab where our engineers took it apart (before putting it together). Here is what they found.

The antenna is large, 17 feet 3 inches overall. The five section aluminum vertical radiating portion is heavy walled tubing, no seams, contributing we feel to the overall strength of the array. The 54 inch radials are 5/16 inch solid aluminum, again contributting to the antenna's overall rugged appearence and performance. The mast clamping section in particular caught our engineering eye. Heavy U bolts,

spaced 8 inches apart, lock down on your antenna mast, while a 12 inch piece of cadium plated steel holds the antenna solid.

This may not mean too much to you, unless you too are shocked when a company can pack so much antenna into a parcel post mailing carton 57 inches long, 3 inches square and weighing under 9 pounds!

The height of the antenna above

the supporting mast is 17 feet 3 inches. This makes it easy to mount, legally.

The impedance matching transformer at the base gives you 1/2 wave length antenna action, with the antenna directly grounded for lightening protection.

Aside from the electrical properties, we felt the antenna could withstand a lot of beating during windstorms. So we checked around and found J. W. Porter, 2A4015, of Morristown, N.J. who told us *"My Magnum withstood gusts of wind to* 65 *miles per hour during the passage of Hurricane Esther, and a steady wind of* 45 *mph during the same storm."*

Satisfied with the mechanics, we gave the antenna to Cliff Price, 12W1188, a broadcast engineer at station KTRB in Modesto and long time CB'er, Cliff's wide range of experience with low frequency antennas made him an excellent choice to put the M-27 through its paces. Cliff's report follows.

"The antenna was assembled strictly according to manufacturer's instructions. The assembly time was 15 minutes, all parts fit together perfectly. The antenna was mounted on my house with a standard chimney mount, and fed with a random length, approximately 60 feet) of RG 8/U coax. A Heathkit AM-2 standing wave and reflected power bridge, lab calibrated for accuracy in the KTRB lab, was pressed into action for SWR measurements. On channels 7-14, our Hallicrafters CB-3 produced 3.1 watts going up the line to the antenna, while reflected power *was not measureable.* During the testing period, on-the-air conditions were very poor. Skip was exceedingly heavy, and even local base stations were rough copy. This made copying our mobile even more unusual out to an 8 mile point.

"To date this is the best CB antenna I personally have had the pleasure of using. The mechanical construction is excellent and electrically it tests out very well. I would highly recommend this antenna to anyone desiring a simple, well constructed and efficient base station antenna."

So there you have it gang, an engineering test on the new Magnum M-27. 10-7

DISCONE

(*continued from page* 20)

black, yellow or red. The plastic will be impregnated with metallic elements to give it electrical properties suitable for antenna use. The plastic version should be lightweight, and require very little, if any, guying. The only connections will include screwing an SO-259 coax connecter to the antenna base, running the coax down through the support pipe, and clamping down three wing screws to the mast.

In conclusion, we would like to say *"Now* we have seen everything." Only we know that's not true. Stinger has a new beam coming up that is just as unusual as the Discone. But that's another story for a later *Report From the Manufacturers Private Files.* 10-7

CITIZENS COMMUNICATIONS

We're off to a flying start with this month's CCM reports. Is your call area represented here? If not, why don't you apply for appointment as a Citizens Communications Manager or Assistant Citizens Communications Manager?

Although not a *must*, we're looking for people with some CB club and/or journalism/reporting experience. You would be expected to meet a deadline each month and furnish us with chit-chat of CB doings in your area. Reports need not be written in the John Steinbeck manner, but should contain all the facts presented interestingly, and with *reasonably* proper grammar. News items can be any one of 1000 things in your area which would be CB'interesting. A typewriter is the only real *must*.

Keep your CCM posted on *your* CB activities.

SECOND CALL AREA: CCM Don Lehr, 2W3911, 39 West Blvd., E. Rockaway, N.Y. ACCM-John Krejc, 2W4586, 40 Lanza Ave., Garfield, N.J.

North Jersey chapter of M.C.E.U. headquartered in Clifton, has been assigned as State headquarters. M.C.E.U. represents Mobile Civil Emergency Units, and is actively engaged in handling emergency net control, first aid and communications. Pres. is Frank Robinson; vice pres., Bert Endress; sect., Al Kupetz; tres., Elmer Molnar. Two new chapters are now being formed in the state.

Local clubs in No. Jersey area are: Jersey Five-Watters in Hillside, No. Jersey C.B. Club in Allendale, and National 11 Meter League in Hoboken.

Bill Halvorsen, 2W3267 Pres. of Nassau C.B. Club advises that plans are being made to hold the 2nd annual gala jamboree Sunday, April 8th. The club is now entering its 3rd year of operation with a new slate of officers to be installed shortly for the coming year.

Suffolk 11 President Herb Humble 2W5935 was instrumental recently in helping to speed police and medical aid to a woman hurt when a vehicle overturned in a remote area. 2Q0516 at the scene, put out a "Mayday" call and Herb picked it up. Nice team work at such a serious time.

FIFTH CALL AREA: CCM Jim Robinson, 8Q0484/5, Apt. 1, 9547 Granby St., Norfolk 3, Va.

Norfolk, Virginia boasts of the newest CB Club in the Tidewater area. The Norfolk Citizens Radio Club was recently formed in Norfolk, Va., and is preparing for their new role in the Norfolk Civil Defense plan. "Stan," 5W2696 is the new chief of Communications for Citizens Band and is preparing the CD organization with the assistance and direction of the Norfolk CD officials. "Stan" is also treasurer of the NCRC. Officers of the NCRC are: "Lyndsey," 5Q1454, Sgt-At-Arms; "Charlie," 5W3015, Chaplain; "Genny," 12Q0334/5, Secretary; "Walt," 5W2403, State Representative; "Joe," 5Q1980, vice president, and "Jim," 8Q0484/5 is the club president. The NCRC boast of accepting 30 new members at the club's 3rd meeting, bringing the club membership total to 43 members in just 3 meetings. The NCRC collected 4 station wagon loads of clothing for the victims of HURRICANE CARLA and assisted the Norfolk CD when the Tidewater area was threatened by HURRICANE ESTER. The NCRC received letters of commendation from the city of Norfolk for their assistance to the Norfolk CD during the Hurricane Ester alert.

From the Virginia beach CB'ers comes the pleasing note that the 1962 Virginia State CB Convention will be held in Virginia Beach, Virginia in August of 1961. "Romie" Harris, 5Q1494 is president of the Virginia Beach CB'ers. Watch this column for more info on the Virginia State CB Convention. From Newport News, Virginia, "Biddle Buddie" Bob Mallison, 5W2423, president of the CB 5 Watters report that their club has been accepted in the state CB Club.

SIXTH CALL AREA: Don W. Sanford, 6Q3944, Box 304, Northport, Alabama ACCM Ken Chambliss 6Q4462, 1324 Cherokee Ave., Columbus, Ga.

Columbus, Ga. CB Club has reorganized with Don Barnes, President, Paul Mabe is V.P. and Fred Altimus, Secretary. A dinner was held Nov. 14, which will be an annual affair. Activities were planned and will be announced later.

The Black Warrior CB Club of Tuscaloosa, Ala. was formed last month with Donn W. Sanford President, Robby Robertson and Thomas Weaver V.P.'s, Carroll Sanford is Secretary and M. D. Smith Publicity Chairman. This group is backed by CD and the Police 100%. They have worked several security patrols following a wave of glass breakage vandalism. There were thirty-five mobile units participating and several arrests resulted. Several members also assisted the Cerebral Palsy drive by picking up donations as they were phoned in during a recent TV show. A base station was set up at CP headquarters.

EIGHT CALL AREA: CCM Ralph Lord, 8W1494, 4834 Crown Ave. Baton Rouge, La.

CB'ers in the area of BIG B.R. are behind the

"NATCH" program 100%! In less than one month we have succeeded in getting the program to work completely and efficiently.

CB get-to-gethers are fast becoming popular. The boys and gals in the New Orleans area had a picnic at "City Park" last month and were visited by Neil & Reba Bouche of Kansas City. The CB'ers in the Baton Rouge area had their Bar-B-Que at Greenwood Park on Nov. 4th and 16Q0990 (Bill Cossette) and Jim & Mae Baldwin of Duluth, Minn., as guests.

CB Radio performed a public service in the town of Morganza, La. on Nov. 13 and 14th when the entire 'phone system was out of service due to heavy rains. CB'ers Frank Cannon, Bozo Tuminnello and brother S. J. (Boobie) Tuminnello had the only means of communications with the outside world! CB has been of great assistance to Louisiana State University during the football season; Baton Rouge CB'ers have supplied operators and equipment to work with University officials in rendering first aid, etc.

At each of the home games there have been from 8-10 CB operators and their rigs, stationed at various points thruout the vast stadium. These operators keep a sharp eye on the crowd in their respective area and report any accident, sickness, etc., to the central station for immediate attention. This service (CB) is supplied to the University at no cost.

TENTH CALL AREA: CCM Bob Johnson, 10W4389, 4300 Rector Ave. Ft. Worth, Texas. ACCM James K. Abney Jr. 10Q2516 P.O. 92, Marshall, Texas

C.B. club, Fort Worth new President 10Q1417 has things rolling. Club's first news letter in December, Editor, Mrs. 10Q0253 Jack Earl of Hurst, heads up one of the top rescue units in this area. Asked C.B. club of Fort Worth to handle communications, a real pleasure. 10Q0970, gave the outstanding coffee break of the year, all CB'ers invited (big success). Music man still on air, new addition "Female" also hungry Cats. What happened to the three letter boys and the Club's committee? Fort Worth. 10Q0245 gave Bar-B-Que for Sports car racing C.B. communications group.

Caddo District C.B. club of Marshall has new highway signs on all highways into town. This group will provide communication for Christmas Parade. 10Q1273 Pres. 10W3913 V.P. 10Q2516 Sec. Treas. "Keep up the good work."

10W4276, is the C.B. net control for Denton County Amateur Radio Club, on the finest examples of joint Ham and C.B. Club cooperation & coordination, we would like to see more of this.

ELEVENTH CALL AREA: CCM R. V. "Doc" Watson, 11Q1125, 2206 W. Palo Verde Drive, Phoenix, Arizona

An emergency call for police and medical assistance made by Al Butler 11W9453 from the scene of a two car accident on the desert south of Bowie, Arizona, was received and passed on to the Michigan State Police by James O. Ewell, 19A6131, of Detroit. The message was relayed to an Arizona Highway Patrolman who brought Aid from 12 miles away to the scene in less than twenty minutes in all. Members and guests of the Arizona Citizens Radio Association were hosted at their November meeting by Willard Groene 11Q0830 (Mummy Mountain Control) who gave his interesting and educational talk "From the earth to the Stars." Accompanied by slides depicting scenes from the depths of the oceans, all the way by submarine, car and rocket to views of the farthest stars. A guided tour of his weather station and a look at the stars through his telescope was also provided.

FIFTEENTH CALL AREA: CCM Spencer Van Noy, 15W1894, 632 E. 3900 S. Salt Lake City, Utah.

The Salt Lake City, CB area has a fine group called the "11 Meter Club." Niles Squires, Pres., John Miller, V.P., Cordon Whall, asst. V.P., Bill Leslie, Sec. and Treas. They meet every Tuesday and have a workshop meeting planned ahead. The last meeting was on tubes (triple triode 6VE6) a very interesting discussion took place. Elwood (Woody) White, 15Q1331, is a Salt Lake City fellow, who should be commended. He is always helping others tune their receivers and checking for loose connections. He also has a lot of nice test gear and knows how to use it. Carl Huffman, 15Q0663, who is an engineer at one of our local TV stations, put two RCA Nuvistor tubes in his set and reports great results. Let's not forget Ralph Jacob 15W0621, who takes his rig airborn when ever he gets the chance. We all hear him when ever he flys over the valley. We even hear him at home 40 miles away.

SEVENTEENTH CALL AREA: CCM Lawrence J. Woods, 17W5910, 1735 Michigan Dr. Evansdale, Iowa.

The N.E. Iowa CB Club, about 50 strong, at Waterloo, Iowa, held an election of officers. Jim Leversee (17W3361) and his XYL Nancy, were elected President and Sec.-Treasurer, respectively. Jim and Nancy hang their mike in Janesville, Iowa.

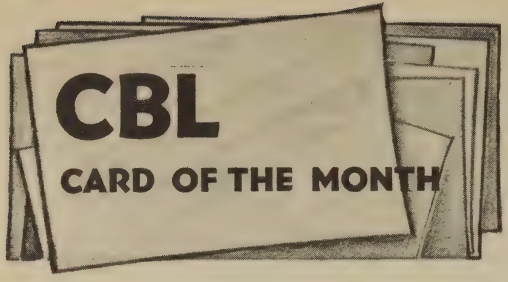
In March of this year, the CB'ers in this area, had a chance to prove their worth, during a flood we had. They had FCC approval to use Ch. 11 for this emergency. The FCC commended all involved for their service to the public. I would like to add, CB Radio was practically the only means of communications in the City of Evansdale, where I live (Evansdale is just on the outskirts of Waterloo). The club is now in the process of forming an Emerg. Unit and would like to hear from similar units for helpful hints. Jim is in the callbook, write to him.

EIGHTEENTH CALL AREA: ACCM-Robert D. Cooper, 930 Monroe Street, Elkhart, Ind.

The C.B. Pioneers Radio Club Inc, of Elkhart, Indiana plans for a statewide club. The pioneers will start this big step in January 1962. The Pioneers had a Teenage Record-Dance at their clubhouse with a big turn out. They plan for more of these dances at a later date. The Pioneers have been active since January of 1961, it has grown from 34 members to cover 75 active members as of this date. The main goal of the Pioneers is for there to be a nationwide club and a nation monitoring channel.

The Michiana CBer's had an open house on the 18 of November at their club house with free drinks for all. There were pies, cakes and sandwiches to eat and as always there were lots of chewing the rag.

10-7

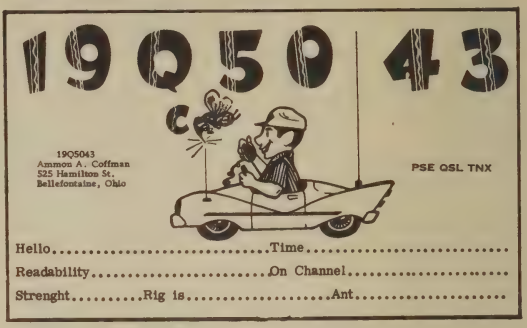


This month's best-of-the-bunch of the CBL cards is awarded to Ammon A. Coffman, 19Q5043, of Bellefontaine, Ohio.

Ammon's perky yellow and blue reception card pictures him (?) in the mobile unit with the letter "C" and a picture of a bee over the hood. We wondered if this was some sort of a pun on the fact that Ammon uses a *Stinger* antenna as the bee's stinger points to the car's whip.

Ammon's card won because it was original, clever and un-cluttered in appearance. It won him a year's extension to his subscription to CBH.

Are you proud of your CBL card? If you are, why not send one in to us and see if yours will be selected as next month's winner. Address all entries to "CBL Of The Month," Box 1557, Oklahoma City 1, Okla. A winning card will earn you a year's extension on your CBH subscription or a free 6 month subscription.



CBL cards are *not* the same as ham QSL cards and are not to be used as "QSO confirmations" in our opinion.

Deadline for February contest is December 22. Mail early to beat the holiday mail swamping. 10-7

CB BY KAAR!

Kaar's four "quality-engineered" units now represent the most complete line of CB equipment available.

The TR327B "D" Phone is the CB enthusiast's dream . . . with 23 tuneable CB channels. Up to five transmit channels — your choice of crystal controlled or precision tuned receive channels.

The TR327 offers four crystal controlled CB channels.

The TR327A adds Standard AM broadcast Band for extra convenience and fun.

The TR330 Han D Phone is the compact, fully-transistorized, portable unit that completes the Kaar CB line. Now available with 400 mw audio for maximum "talk power."

WESCON AND ALCOA DESIGN AWARD WINNERS

KAAR ENGINEERING CORP.
2995 Middlefield Road, Palo Alto, Calif.
Please send more details about Kaar CB

Name_____

Address_____

City_____ State_____

An XYL's Lament

By MRS. NELE O'NIEL, 4W2666

Just became a CB'er!
I bought me a rig.
But all of this talk,
I simply can't "dig."

The way that they count,
Confuses me so.
Ten four, and ten ten,
After someone says "go."

There's a Roger and Skip,
And these two I like!
But who in the world,
Is the one called Hot Mike?

There's a Johnson and Browning,
And a Lafayette, too.
But who is Gizmotchy?
He's somebody new.

They keep speaking of Crystal,
But she's never around.
And what good is a plane,
When it's right on the ground?

There's a relay in traffic.
Sounds dangerous to me!
A relay's a race.
So how can that be?

And why an umbrella,
When there's not any rain?
A whistle—girl's like,
But these fellows complain.

Some people use whips,
And I guess some use rocks.
But who in the world,
Would want a black box?

How long is a wave length?
And why do they care?
Any simpleton knows,
It's as long as your hair.

There's a thing they call beam.
And a long Duopole.
And what is a feed-back?
I'd sure like to know!

Then there's diathermy,
Plus heterodyne.
They both sound contagious.
I'm glad they're not mine.

"Can you copy, or read me?"
They always ask.
This sounds to me,
Like a mimeograph's task.

It's too much for me!
But give me a shout.
And with seventy threes,
I'm over and out!

NOW...Tomorrow and for years to come!

Sonar CITIZENS BAND RADIO

• 8 Channels, crystal controlled transmitter and receiver • Tunable receiver for 22 channels • Transmitter 100% Class B modulated • Adjustable squelch • Automatic noise limiter • R. F. Power indicator • 1 Year guarantee • Easy to install. Ideal for home, boat, car or business. Weighs only 9 lbs... 4¾ x 9½ x 11¼ • FCC Type accepted* (*in preference to only certification).

with 1 pair of crystals, microphone and power cables

$179.50

SONAR RADIO CORPORATION, 3050 W. 21 St. • B'klyn 24, N.Y.
Please send me complete information on Model "E" CB Radio.

NAME_____

ADDRESS_____

CITY_____ STATE_____

CHOOSING AND USING

(*Continued from page 9*)

drill another hole in the same spot, large enough to take the particular antenna you're using. The antenna installation instructions will tell you the size hole to drill; 5/8-inch is the usual size. Be careful when working on the top of the car to avoid buckling the steel top, which would mar the finish and cannot be repaired.

Now, mount the antenna in the large hole as directed in the instructions which come with the antenna. Feed a "snake" wire between the upholstery and the car body, working from the space which did house the dome light, until the "snake" comes out somewhere under the dash—this may take some patience, but it's easier than reupholstering. When the "snake" comes through, tape one end of your coax feedline to it, and pull the coax back along the same route so that it runs from the dome-light hole to somewhere under the dash.

Connect the end of the feedline to the antenna as directed in the individual antenna instructions; some use coax connectors while others require screw-type terminations. Then replace the dome-light assembly, and attach a coax connector which will fit your rig's terminal to the other end of the feedline. Plug this connector into the rig, tape any surplus feedline out of the way under the dash, and the installation is complete.

Purchase one of the smallest-size (4x4x2) miniature chassis boxes and a two-foot-square sheet of aluminum, flat tin, or brass. Be sure that the chassis box is the kind which has two flat sides held on by screws rather than the interlocking variety.

Remove one flat side of the chassis box and discard it. Drill the antenna-mounting hole in the center of the other flat side. Drill another hole, for the feedline, in one of the narrow sides. Thread the feedline through its hole and connect it to the antenna, which should be mounted in its hole.

Now, secure the box to the center of the aluminum sheet using the original screws. Cushion the screwheads with tape. Position the entire assembly in the center of the auto top, and fasten it down with 2-inch-wide masking tape along all four sides. Run the feedline in through a window (for a temporary installation) or around the front-door weatherstripping so that it enters at the windshield "knee" (for a more permanent affair).

Windshield-Corner Whips

To install a windshield-corner whip, pretend you're putting in a regular car-radio antenna. Locate the proper place (this is the point which looks best to you, so long as it's at least six inches away from the windshield corner post or other metal), and center-punch for a guide hole.

Next, drill a hole the proper size (the antenna instruction sheet will give you this information). Attach the coax feedline to the antenna, thread it through the hole into the engine compartment, and secure the antenna in place.

Find a convenient hole through the firewall—almost every car has several which will do—and feed the coax through this hole into the passenger compartment. The only thing left to do is attach a suitable connector to the transmitter end of the coax, and hook it up.

Bumper-Mount Whips

Bumper-mount whips may be installed in either of two ways. The simplest, which incidentally is the method which gives the type its name, is with a special bumper clamp which hooks onto the rear bumper. Once the clamp is hooked into place and tightened on the bumper, the antenna is threaded onto the top; that's all there is to it.

The other method makes use of a body-mount base, which requires one large hole (1-1/2 inches in diameter) and three smaller ones to be drilled in the rear fender. The body-mount base is then attached securely to the car, and the antenna threaded onto the top. This mount is slightly more secure, but the four holes mar the car come trade-in time.

If you use a body-mount, the antenna feedline must be attached to the inside of the body-mount base; from there, it can be threaded along the frame under the car up to the engine compartment, then run back through

the firewall as for the windshield-corner whip.

When using the bumper bracket, the coax can be brought through the trunk, fed through behind the back seat, and then brought under the floor mats to the front seat area.

Accessories

Possibly the most essential accessory for mobile CB operation is a high mountain, to be placed under the car before every transmission. This will increase your range surprisingly!

Seriously, mobile work is often affected by the terrain. In cities, tall buildings (or even smaller all-metal structures can scramble the radio waves so thoroughly that your receiver won't recognize them. In open country, something called "diffraction effects" frequently cause alternate "hot spots" where range is exceptional and "dead spots" where you will think your rig has gone completely haywire.

If you often drive through these "dead spots," you'll want a field-strength meter installed as a permanent accessory. This device will tell you at all times whether your rig is putting out its maximum RF into the atmosphere; if the field-strength meter reading is normal, yet you get no replies, have no fear—you're just in a "dead spot." On the other hand, should the field-strength meter reading fall off, you have troubles in the rig or the antenna, and should seek service.

Naturally, for peak performance you'll want to make sure the antenna is properly peaked—and the field-strength meter is handy here too. Most antennas will work well over the entire band, but their performance can be improved on any one channel by proper peaking. To accomplish this, trim down the length of the whip (not more than ⅛ inch at a time) and check the field strength between each snip. When the strength just begins to fall off, stop—you're tuned.

A more accurate method of tuning the antenna involves another accessory — the SWR bridge or Reflectometer. These devices measure the perfection of the match between feedline and antenna; if this match is perfect (or nearly so), the rig will deliver its best performance.

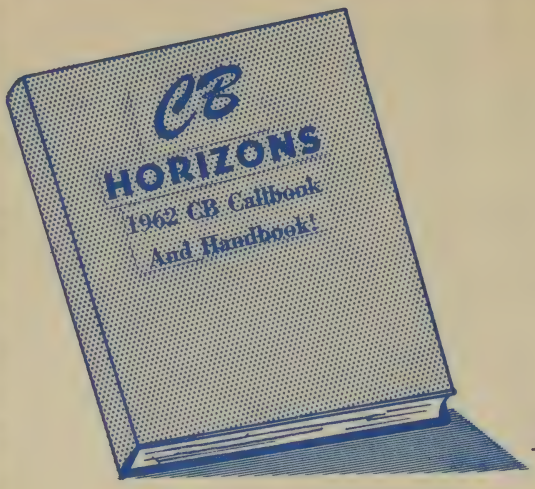
Contrary to what you may have heard or read elsewhere, the length of the feedline is immaterial *if* you have a good match between the coax and the antenna; under this condition, the rig thinks it's feeding a 50-ohm resistor and can't tell how much or how little feedline is present!

The SWR bridge or Reflectometer (two types of gadgets which do the same thing and are used in the same way) is not permanently mounted in the car; it's used like a tune-up meter, inserted in the feedline only when needed and used elsewhere if needed. After all, home station rigs need matching, too. The only thing to watch out for in the mobile installation is to make sure the bridge can be inserted in the line; this is no trouble if you make up a pair of jumper cables from the coax with plugs to fit the rig and the antenna on one end of each, and plugs to fit the bridge on the other ends. If the rig connector fits the bridge also, only one jumper will be needed. Just unplug the coax from the rig, connect it to the "Load" or "Antenna" side of the bridge, and connect the jumper between the rig and the "Input" side of the bridge. Tune the antenna as described above, trimming until the SWR indication is as close to 1.000 as you can get.

The FCC requires you to have a Form 452-C (Revised) attached to your transceiver. This is a small tag which provides acceptable identification for your unit. They're given free at any FCC office.

Naturally, there are many accessories available which we haven't room to list here. Among these are such things as whip clamps, to hold bumper whips down when they're not in use; chest-type microphones which free both hands for driving; boom-type headsets which combine mike and earphone for the same purpose, and many other items.

However, the basic items we have listed will provide you a complete mobile installation, and give you the key to a new world of communication possibilities. Try it! 10-7



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This book will be published in a limited edition and you MUST order now to be assured of receiving a copy before they're gone. This is the up-to-date and expanded version of the famous CB Callbook which International Crystal brought out and is the ONLY national CB Callbook published.

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Rates for classifieds are 10c per word for advertising which, in our opinion, is obviously of a non-commercial nature. A charge of 25c per word is made to all commercial advertisers or business organizations. We do not bill for advertising in CLASSIFIEDS, nor can we acknowledge receipt of copy sent in. Full remittance MUST accompany all orders.

NOTE: The products and services advertised in this section are not guaranteed by the publisher of CB HORIZONS. Closing date for the February issue is December 25th.

CB'ERS A DUAL CONVERSION ADAPTER kit, all parts, schematic, pictorial; hear only the channel you tune. For HE-20 and HE-20A; Mark VII $15.50. HE-15 & HE-15A; TR-800 & TR-910, RA-395, RA-442, etc. $14.95. Add $2.00 for tubes with each unit ordered if desired, or $5.00 plus C.O.D. to Bainbridge Radio, 2649 Bainbridge Avenue, New York 58, N.Y.

R/C MODEL BUILDERS—Brand New Babcock BCT-10 Transmitter, Mark II escapement, Mark III receiver. Never used, cost $60.85, sell for $25.00 C. L. Riecke III, 6W0652, Rt. 1, Box 264, Johns Island, S.C.

FREE SAMPLES—CB QSL CARDS. $2.50 per 100 in 3 COLORS, POSTPAID. Garth Printing Company, Box 51, Jutland, N.J.

HIGH POWER (135 watts) ham transmitter for all bands 160 meters thru 10 meters. TVI-d, made by E. F. Johnson. Fone or CW. Top notch condition and clean—sacrifice for $95! First check or money order takes it! Once in a lifetime change if you're thinking of becoming a ham or if you're already on the air. Tommy Hoshall, 4005 N. Pennsylvania, Oklahoma City, Okla.

CITI-FONES—CD5 and Deluxe CD6. Write for literature and prices. C. L. Riecke III, 6W0652, P.O. Box 3011, Charleston, S.C.

STOP WASTING THOSE WATTS! Let the SWR-1 help you improve that innefficient antenna system! Read your rf power and SWR directly in watts—no more guessing! Only $19.95! Write for details today! Dealer inquiries appreciated. H&L Electronics, P.O. Box 125, Medford, Ore.

PLASTIC NAME/CALL LABELS—Adhesive back. Personalize your rig. White raised letters on black or brown background. Five call signs or one name and call sign $1.00 M&W Sales, Dept. 1, Box 905, N. Elizabeth, N.J.

SK-3 RF PRESELECTOR kit for Heath GW-10 transceiver. Increases sensitivity at least three "S" units, 18 db. Wire and install in one evening. Inconspicuously mounts at rear of transceiver; extends only 1½". No original GW-10 wiring cut, only one wire unsoldered. High-GM tube, all parts, complete instructions included. Hundreds of pleased users. Send $8.99 (postpaid) to Holstrom Associates, P.O. Box 8640, Sacramento 22, Calif.

SCOTCHLITE CALL TAG—Your personal call in brilliant blue lettering on an 8" x 3" Scotchlite reflecting background. Identify your antenna with a reflective CB Tag on your mobile units. Makes excellent Xmas gift. Send your call and $2.00 for each tag or 2 tags for $3.50 ppd. to C.C. Sales Company, R.D. #1, New Salem, Pa. (Picture of Tag advertised in September issue of CBH).

SUPERREGENS (Tubes). Increase receiver sensitivity; selectivity. Resistor change. Information 50c from R.M., 901 Edgemere Drive, Plathe, Kansas.

TCS CODER DECODER—Silent communications for all CB units. Send for Bulletin TCS-H, Gyro Electronics Co., 36 Walker St., New York 13, N.Y.

CANADIAN PRINCIPALS want to buy tooling, engineering, materials for CB line. Please send literature, particulars, price to Mr. R.T., c/o Box 743, Delhi, Ont., Canada.

CB QSL CARDS—100 four-color $3.70 postpaid. Samples ten cents or send twenty-five cents and receive large selection and free DANGER HIGH VOLTAGE sign. Dick Stauffer W8VXK (CB license pending), 1996 N. M-18, Gladwin, Mich.

TECHNICIAN? Must sacrifice my customized 70 watt 6 meter fone/CW rig. Really cuts through the QRM. This particualr rig won 2 VHF contests. Eight months old — a beauty complete with power supply for 110 VAC. Modulates with two 6V6's. Only $95. Tommy Hoshall, 4005 N. Pennsylvania, Oklahoma City, Okla.

CB'ers—YOUR NAME, CALL LETTERS, Ch. Nos. 1 to 23, ¼" H on, cut up stick on plastic strip; send $1.00, Bainbridge Radio, 2649 Bainbridge, New York 58, N.Y.

Hey CB'er!

Got any unwanted equipment around the house? Want to turn it into $$$? Notice that we have revised our classified ad rates to let you display your wares in front of more than 55,000 other CB'ers at only ten pennies per word. Here's your chance to rid yourself of that horrible polka-dotted ground plane your Aunt Matilda gave you for Christmas!

CLYDE'S CORNER...

by Clyde D. Moore, 9W0219

Clyde Moore, CBH Editor at Large, is on an extended motor trip throughout the U.S. His purpose? To meet you and report your CB activities and the activities of your CB club to other CB'ers and clubs throughout the country. Look for his light blue Chevy GREENBRIER with the 2 CB whips. He monitors NATCH-9 and 11.—Ed.

This month we really moved across the country. From Lubbock, Texas to Madison, Wisconsin and back home to Pipe Creek, Texas for the holidays. Before leaving Texas we stopped in Rule to see Jess Place, 10W3395, who was unable to attend the big jamboree in Lubbock because of sickness. There are about twenty farmer/rancher CB'ers in his area and they monitor channels 5, 9 and 11.

Denton, Texas, was next in line but we were a bit late in arriving and could not make contact. The *"Denton CB Radio Club"* monitors channels 9 and 11, and are very active from what I hear.

In Pauls Valley, Okla., we met Don Adams, 10W4058, at the *J. C. Yeatts Furn. Store.* There are about ten stations in the area and they monitor channels 11 and 6.

We stopped in Okla. City and visited our new CBH offices in the *Times Journal Building.* T. K. and his XYL, Judy along with their two children, had just arrived from Calif. After an enjoyable evening with the T. K.s we were off to Joplin, Mo. Here we met Don Ricket, 19A7872, of Zanesville, Ohio. Don and his XYL were on their return trip home from a CB vacation tour.

The "71" cafe in Joplin have their call letters, 17Q1429, painted in big red numbers on top of the cafe. They monitor ch. 22 from 6:00 a.m. till 11:00 p.m.

The *"Missouri, Oklahoma, Kansas Citizens Band Radio Club"* and the *"M.O.K. CD Corp"* were called upon to assist state and local police in the search for a 13 year old girl and her kidnaper. They found the man, and later found the girl. She had been shot and badly beaten. They have a weather watch that extends to the Muskogee area and ties in with the *Muskogee CB Club.* The CB/CD have a emergency truck that is somewhat like the Muskogee truck. There are about 100 CB'ers in the area and they monitor Channels 22, "NATCH 9" and use ch. 1 for CD work and drills.

From Joplin to St. Louis and on to Bloomington, Illinois, where we had a coffee call and met the *"Cornbelt Citizens Banders".* They have some 70 active members monitoring NATCH, 5 and 11. They also have a communications car, made from a 1948 Packard ambulance.

The 18th district has more active CB'ers than any other district. Because of their great number they have calls in the 18QA and 18B group. From the Blooming area to Rockford we maintained constant contact with stations along the way.

In Rockford we met a new club that has not been named at this time. The 40 members met at Rockton, at one of the members home. After the meeting refreshments were served. This is a fast growing club and they monitor ch. 7, 9, 11.

The *"CB Niters"* of Rockford are

very active. They have a membership of thirty, their own club house, and they will start monitoring "NATCH 9" the first of the new year.

A CB radio demonstration was conducted for the *Illinois State Police* on Sunday Nov. 12, at 2:30 p.m. on ch. 11. The purpose was to show just how many CB'ers could be reached and how much range could be covered. The *"Cherry Valley Radio Club"* proved that CB could be used in an emergency and they could get the message through.

I was invited to attend a Boy Scout Meeting by Scoutmaster David Joscelyn, 18Q9336. He and his Troop of scouts use the Boy Scout channel 22, in all their activities.

The *City Water And Sanitation Dept.* of Rockford employ CB radio in their trucks. The Rockford CD use the city trucks in their drills. The CD members all have CB radios in their cars. They all use channel 22.

The *"C.B. Air Kings Radio Club"* of Freeport, Ill. has 40 active members. Grayson Blacker, 18W6765, President of the club invited us to a meeting, but we were unable to attend.

Freeport also has another club known as the *"CB Hurricanes"*, also a very active club.

We heard about the *"De Kalb County C.B. Radio Club"* in De Kalb, Ill. But we were unable to meet this group.

While in Rockford we met Mr. Hugh J. Daly, Sales Manager for *Globe Electronics.* I went on a tour of the plant to see just how their CB gear is made. They have a very efficient operation. By the way—they have a new program that will go in effect the first of the year. This program will be introduced along with their new CB rig. The new *Globe* CB radio transceiver is pretty much a secret at this time, but they feel it will be many years ahead of other sets, and should cause great excitement in the CB field. Watch CBH for more news about this new equipment.

In Stoughton, Wisconsin we met William Richter, 18QA0114, President of the *"Lakeland Citizens Radio Net"*. "Bill" and other members of the club had planned an enjoyable evening for us. After a wonderful meal we had a discussion at Bill's home. There are 34 members in the club and they are working towards being the most up to date club in Wisconsin.

After leaving there we headed back to Texas and warmer weather. We had coffee in Joplin with our old friend John Rutherford, 10W0628, from Fort Worth. In Tulsa we stopped for coffee with members of the *Tulsa Radio Relay League.*

Back in Texas again, we met the CB'ers in Cleburne. Earl King, 10Q2190, stated "I was sold on the use of Citizens Band radio when we had a four year old boy fall in the Nolan river. I called on one of the boys (CB'er) to round up some help. He got on his CB rig and in a few minutes I had all the help I needed. They did a good job, but without the CB rigs it would have taken much longer." Sheriff King also said, "On the Police radio we help the other fellow, but on the CB radio the other fellow can help us."

The *"Johnson County Emer. Squad"* is organized with the CD and they help Sheriff King any time he needs them. They monitor ch. 11 twenty-four hours. 10Q1945 is the local monitor and emer. standby station. 10-7

NOVEMBER GIVEAWAY WINNERS

This month our little gal Dee pulled the following lucky CB'ers' names from the barrel.

First Prize: *Lafayette HE2OA*—Mr. G. B. Hunt, Van, Texas.

Second Prize: *CESCO Transicheck*—Mr. Leonard Dingman, Lake Placid, Fla.

Third Prize: *Stinger Antenna*—Mrs. Louise Sands, Cataumet, Mass.

Fourth Prize: *Set of JK crystals*—Mr. S. L. Shyers, Newark, Del.

Fourth Prize: *OZCO Snoozer*—Mr. Wayne Spearman, North Charleston, S. C.

Fourth Prize: *2 Year Subscription to CB Horizons*—Mr. Guy Howard, Jackson, Ga.

T.K. on C.B.

by TOM KNEITEL, 12Q1747

Pity The Poor CB'er

Being a CB'er, one frequently finds himself on the receiving end of a lot of shennanigans. Why? Because, for a large part, CB'ers are relatively new in electronics, without sufficient technical knowledge to know when they are being cleverly "taken."

As a result, there are those who have set up their tents along the highways upon which we travel and try to peddle us their wares before we reach the legitimate markets.

As the voice of the CB'ers of America we feel a keen awareness to protect our readers from those who operate in this manner. As a result, we have even gone so far as to actually refuse certain misleading advertising because we felt that it would not be in *your* best interests.

There are other forces too who would try to "throw the CB'ers anything" because we aren't supposed to know any better. I'm speaking of people right here, in the magazine industry.

You know, success is a funny thing —it gives some people a good feeling and it gives others indigestion, all depending whose success it is. When we became successful it gave *some* other magazines a slight case of heartburn and now they have taken action — action intended to "starve" us out of editorial material. We won't starve, we assure you — and we wouldn't really care about their action at all if it weren't for the fact that they themselves are guilty of trying to give the CB'ers a run-around.

Here's what we mean. Just recently, a letter went out from a certain publication informing certain electronics writers that if they supply CBH with articles they would no longer find a market with that magazine.

That same magazine had two CB construction articles in one recent issue — neither one of them worked, however the unwitting CB'er couldn't have known this until he not only paid for the magazine but also for many dollars worth of electronic components. Another recent issue acclaimed (on the front cover) that *CB'ers* would find inside a construction project for an instrument which would be of definite use to any CB'er. And what did it turn out to be? A unit designed and calibrated for the Amateur Radio service — the unit's front panel didn't even show the words "11 Meters" — just markings for operation on 6 *ham* bands. There are many other similar incidents, however there is no point in enumerating them here.

Now this is what bugged us. If they were giving the CB'ers a fair shake we would be the first to wish them more power — certainly there are general interest electronics magazines which try to include bona fide CB articles which will be of use to CB'ers (ELECTRONICS ILLUSTRATED is one). At any rate, the people who are feeding you these irresponsible articles were the first ones to try to keep you from getting good articles, from well known writers, in CB Horizons!

As we said before — have no fear. CBH is pledged to bring you the finest articles available for publication. You will always receive articles written in an easy-to-understand manner and may rest assured that when you plunk out your hard earned dough for components the unit will work. Oh and one other thing—the letter that went out didn't scare a single bona fide writer.

10-7

Meet CBH's New "EASTERN CLYDE"

Our curly-headed Texas CB'er, Clyde Moore, has been received so well by western-states CB'ers that it hurt us to think that it might be several years before he got back east.

Who would be the best one to solve this dilemma but ol' Clyde himself. And that's just what happened—at the Lubbock (Tex.) CB jamboree.

Seems that one of the visiting CB'ers was Gardiner G. Greene, Jr., 1W4844,

of Laconia, N.H. Gardiner was just about to embark upon his own cross-country CB jaunt and it just seemed the natural thing to do to ask him if he would consider keeping CBH readers informed of his roamings. Darned if he didn't accept the offer! So now we have an "eastern Clyde" to satisfy the needs of the eastern-states CB clubs who feel that we are giving them the cold shoulder.

Gardiner is employed as a field sales engineer with Browning Laboratories and will have tucked under his arm demonstration models of the entire Browning CB line. Look for him in his snazzy new Ford *Country Sedan* station wagon (he monitors Channel 11). First stops — (shortly after New Years') Virginia, Florida, Alabama, Georgia, and the Gulf area. He'll eventually cover all states.

If you live in these areas and you would like to have Gardiner speak to your club you are invited to contact him in care of CBH. 10-7

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Courtesy of CBH and the CB Manufacturers of America!

NO MONEY! NO BOXTOPS! NO CONTESTS! JUST PRIZES!

All you do is fill out the card between pages 40 and 41, (or reasonable facsimile) paste a stamp on it, mail it to us before January 10th—and you have a chance at 8 prizes! Winners will be notified by mail and announced in the March issue. Below are the prizes this month—be sure and see what we're giving away next month (the prizes will be announced in our February issue).

$166.84 IN PRIZES THIS MONTH!

FIRST PRIZE—A Lafayette HE20A Transceiver ($109.50)

From Lafayette Radio, 165-08 Liberty Ave., Jamaica 33, N.Y.

14 tube performance! Tunable superhet receiver with 4 fixed channels, S-meter, input wattage meter! Push-to-talk! Squelch! With crystals for "NATCH" (Channel 9).

SECOND PRIZE—An Electro-Voice Model 729SR Mike ($15.90)

Donated by Electro-Voice, Inc., Buchanan, Mich.

Ceramic mike with 60 to 8,000 cps response! Unit has pressure diecast zinc front and plastic back in two-tone gray and black. Cardioid polar pattern.

THIRD PRIZE—A Cush-Craft Model CG-11 Ground Plane ($12.50)

Donated by Cush-Craft, 621 Hayward Street, Manchester, N.H.

Top notch ground plane, which erects in a few minutes!

FOURTH PRIZES—A Vanguard RF Amplifier ($10.99 list)

Donated by Vanguard Electronic Labs., 190-48, 99th Ave., Hollis 23, N.Y.

Receiver signal booster contains high gain pentode tube in a circuit tuned to 27 mc. High image rejection. Wired.

AND

A Set of JK Crystals ($5.00)

Donated by James Knights Co., Sandwich, Ill.

For any unit, either transmit or receiving. Guaranteed .005% tolerance. Two crystals if you win.

AND

An OZCO Snoozer Squelch ($2.00)

Donated by OZCO Sales, Canaan, Conn.

Add-on squelch quiets your receiver to a hush!

AND

A Subscription extension to CB HORIZONS ($8.00)

Donated by Horizons Publications, P.O. Box 1557, Oklahoma City 1, Okla.

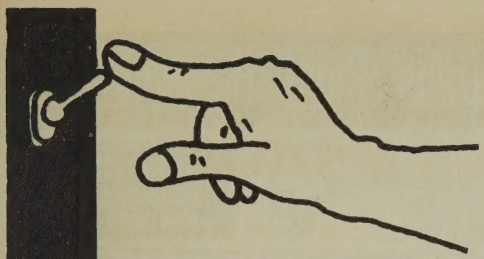
If you are a subscriber you get a 2-year free extension to your subscription!

AND

A CESCO Generator Noise Filter ($2.95)

Donated by CESCO, 6151 Dayton Liberty Road, Dayton, Ohio.

Eliminates generator whine in mobile installations. Made for CB.



BEFORE WE SIGN OFF

D. C. FLASHES!!

By REX HOLMES, 24W2424
"Our Man in Washington"

Backstairs At The FCC

There seemed to us to be yet another slowing down of FCC license grants in the CB service, so we set about finding out what the score was. Apparently the Commission is handling as many applications as usual but they are bouncing more and more — to the point where the rejected applications are now quite sizeable.

As you know, most of the licenses are granted in Gettysburg, Pa. They now have a machine which puts the call sign, date of grant, signature and a comment about the license superceding all others—on at one time. The machine is set up to grant licenses twice a week and the licensing group works on the processing all week to get the licenses ready for the machine. In their spare time (?), a small group of licenses are granted every d a y b y typewriter. Therefore, while grants are made in Gettysburg every day, three days are very light (typewriter work) and two days are quite heavy. The only explanation we were able to get when we checked was that the Gettysburg personnel can handle only so many applications and if they have a lot of returns, then they can't grant so many new licenses.

Here's an interesting thing which you should know about because it affects the number of grants. In the near future, five of the Class D CB licensing clerks will be reassigned to Amateur licenses. This change was supposed to take effect on October 1, was later changed to November 1, but has been postponed again. There are presently 16 Class D clerks in Gettysburg — five of whom have been more or less learning the licensing procedure, in preparation for their later assignment to Amateurs. We understand that the remaining 11 will make up the regular compliment of CB clerks.

Here's A Switch

FCC'ers are laughing at the story about the recent visit of an FCC Dallas office engineer to the home of a CB'er who was the subject of numerous complaints. His walls were plastered with QSL cards attesting to his beautiful skip contacts.

Upon sight of the FCC engineer, the CB'er *insisted* on returning his license to the engineer, stating that it had caused him a lot of trouble and saying that he was going to take out a ham ticket to engage in trouble-free DX-ing, the thing in which he was primarily interested.

First Canadian CB'er

Isaac Russell, who operates *Isaac Russell's Taxi,* in Calais, Maine, was ordered by the FCC to show cause why his CB license shouldn't be revoked for misrepresentations he allegedly made when he filed his application. He had stated that he was a U.S. citizen, but apparently was and is a citizen of Canada.

Other FCC Action

The Commission has dismissed the charges for license revocation against Heyward J. Gainey, of Kannapolis, N.C.

Gainey was charged with making transmissions not addressed to specific persons or stations within his direct grownwave coverage area and with failing to respond satisfactorily to his citation.

It turned out that he did, in fact, reply to the citation but because his signature was not legible and the text of the reply did not contain reference to his callsign or the docket number of his case, his reply letter was "misdirected or misplaced." 10-7

LAFAYETTE is America's Citizens Band Headquarters

NO LICENSES, TESTS OR AGE LIMITS

9 LAFAYETTE TRANSISTOR *CITIZENS BAND* "WALKIE TALKIE"

39.95
2 for 78.88
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HE-29A

● **Completely Wired—Ready to Operate** ● **Fully Transistorized—9 Transistors plus 1 Diode** ● **Uses Inexpensive Penlight Batteries** ● **No License, Tests or Age Limits** ● **Comes with Leather Carrying Case, Earphone, Antenna, Batteries and Crystals**

As simple and easy to use as the telephone—and twice as handy. Receives and transmits up to 1.5 miles under average conditions. Weighs only 18-oz. and slips into your pocket. Push-to-talk button operates built-in speaker as sensitive microphone.

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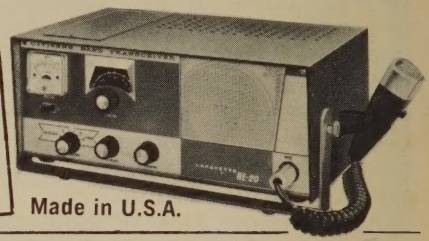

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109.50
NO MONEY DOWN

Made in U.S.A.

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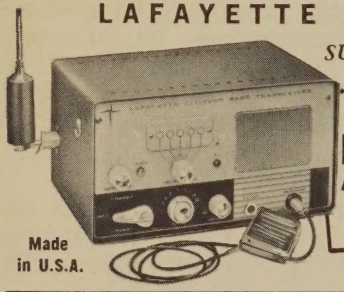

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● **Completely Wired—Not A Kit** ● **5 Crystal-Controlled Transmitting Positions** ● **Tuneable Receiver Over Full 23 Channels** ● **High Output Ceramic Microphone** ● **Complete with Transmitting Crystal for Channel 9**

A compact, precision transmitter and receiver covering up to a 20 mile or more radius, depending upon conditions. The HE-15A features an effective full-wave variable noise limiter, planetary vernier tuning. RF and, microphone jack on front panel, 12 tube performance from 4 dual-function tubes, 2 single-function tubes, 2 rectifiers.

HE-19	Telescoping Whip Antenna	Net **3.95**
HE-16	Power Supply for 12 Volts	Net **10.95**
HE-18	Power Supply for 6 Volts	Net **10.95**

LAFAYETTE ALL-IN-ONE CITIZENS BAND MOBILE ANTENNA

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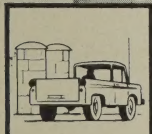

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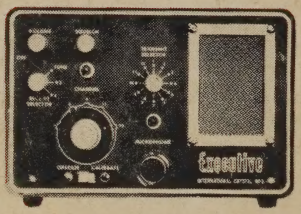

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